

To:

Eric S. Therkildsen

From:

John D. Baranzelli

Subject:

Pavement Design Exception

Date:

May 8, 2012

FAP Route 734 (IL Route 2)
Section 77-2-1 & 77-2B-2
Winnebago County
From north of Latham Road to north of Roscoe Road

We have reviewed the pavement design for the above captioned section, which was submitted by email dated April 6, 2012. Based on life cycle costs, the rigid was the most cost-effective. The district requested using the HMA option to match the adjacent section of IL 2.

Attn: District Two

Because the difference in life cycle costs exceeded 10%, the flexible pavement design request was forwarded to the Director of Highways for approval. Approval was granted on May 7, 2012.

The approved pavement design is as follows:

IL Route 2 From north of Latham Road to north of Roscoe Road

- 11 inches of HMA Pavement (Full Depth)
 - 2 inches of Polymerized HMA Surface Course, Mix "D," N70
 - 3 inches of Polymerized HMA Binder Course, IL-19.0, N70
 - 6 inches of HMA Binder Course, IL-19.0, N70
- 16 inches of Sub-base Granular Material, Type CA

If you have any questions, or need further information, please contact Paul Niedernhofer at (217) 524-1651.



To:

Director of Highways

From:

John D. Baranzelli

Subject:

Pavement Design Exception

Date:

May 2, 2012

FAP Route 734 (IL Route 2) Section 77-2-1 & 77-2B-2 Winnebago County From north of Latham Road to north of Roscoe Road

Calculations favor a rigid design for IL Route 2. Since the cost differential exceeds 10%, an exception request must be approved by the Director of Highways. The district would like to use the flexible design based on the following reasons:

- The adjacent southern section of the IL 2 roadway project, is presently under construction utilizing a flexible design; and
- HMA pavement will provide easier stage construction, especially for the two intersections within the project.

The recommended pavement reconstruction for IL Route 2 would be:

IL Route 2 From north of Latham Road to north of Roscoe Road

- 11 inches of HMA Pavement (Full Depth)
 - 2 inches of Polymerized HMA Surface Course, Mix "D," N70
 - 3 inches of Polymerized HMA Binder Course, IL-19.0, N70
 - 6 inches of HMA Binder Course, IL-19.0, N70
- 16 inches of Sub-base Granular Material, Type CA

If you have any questions, or need further information, please contact Paul Niedernhofer at (217) 524-1651.

| Concur | |
|---------|----------------------|
| Discuss | |
| | Director of Highways |





Illinois Department of Transportation

Memorandum

To:

John Baranzelli

Attn: Paul Niedernhofer

From:

Eric S. Therkildsen

By: Jay Howell

Subject:

Pavement Design

Date:

March 26, 2012

FAP Route 734 (IL 2)
Section 77-2-1 & 77-2B-2
Winnebago County
Job No. D-92-005-89
Contract No.84983
IL 2 from north of Latham road to north of Roscoe road

Attached is the pavement selection analysis for the subject section. This section consists of approximately 94,400 square yards of new pavement. This project was initially part of the expressway construction of IL 2 from Elmwood road to Roscoe road and was broken down to two parts due to lack of funding. The first section is presently under construction using 12.5" full depth HMA

pavement.

Due to the change in the pavement design chapter in the BDE manual, we decided to reevaluate the pavement design for this section using the new design criteria.

Mechanistic Pavement Design indicates that jointed PCC pavement presents the lower first and life cycle costs, providing a 16.7%% annual cost savings versus a flexible pavement design.

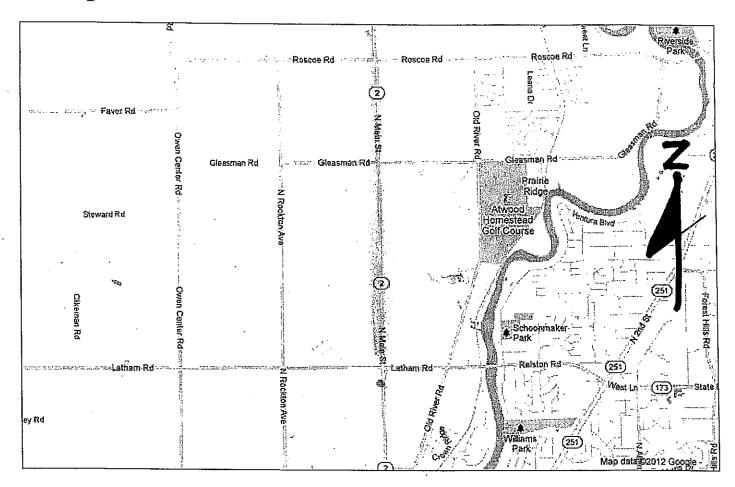
Although the jointed PCC pavement is less costly compared to full depth HMA pavement, the District recommends the selection of the full depth HMA for the following reasons:

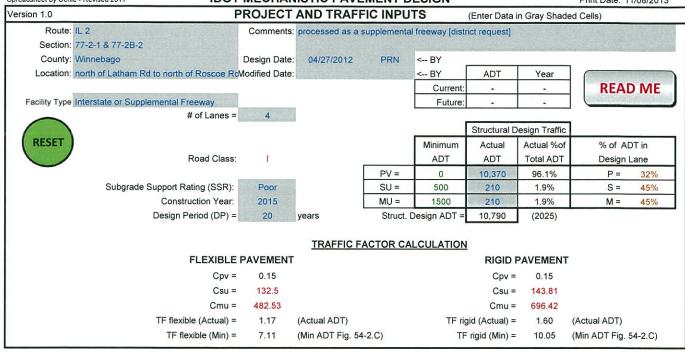
- -HMA pavement was selected for the south section and using the same pavement will provide continuity.
- -HMA will provide easier material to stage during construction; hence there are two major intersections that will need to be reconstructed with this section, Gleaseman road and Roscoe road.

If you have any questions, please contact Sam Abdullah at 815/284-5935.

Attachments

Google





| | Full-De | pth HMA Pa | vement | JPO | CP Pavem | ent |
|--|--|--|----------------------|---------------------|----------|-------------------|
| | Use TF flexible = | 7.11 | _ | Use TF rigid = | 10.05 | |
| | PG Grade Lower Binder Lifts = | PG 64-22 | (Fig. 53-4.R) | Edge Support = | Tied | Shoulder or C.&G. |
| Goto Map | HMA Mixture Temp. = | 73.4 | deg. F (Fig. 54-5.C) | Rigid Pavt Thick. = | 10.00 | in. (Fig. 54-4.E) |
| Contract of the Contract of th | Design HMA Mixture Modulus (E _{HMA}) = | 740 | ksi (Fig. 54-5.D) | | | |
| | Design HMA Strain (ϵ_{HMA}) = | 69 | (Fig. 54-5.E) | CRC | Pavement | (TF > 60) |
| | Full Depth HMA Design Thickness = | 11.25 | in. (Fig. 54-5.F) | Use TF rigid = | 10.05 | |
| Goto Map | Limiting Strain Criterion Thickness = | TOTAL STREET, SHOULD SEE TO SH | in. (Fig. 54-5.I) | IBR value = | 3 | |
| | Use Full-Depth HMA Thickness = | 11.25 | inches | CRCP Thickness = | 999.00 | in. (Fig. 54-4.M) |
| | | | | | | |

TF MUST BE > 60 FOR CRCP

| RECONSTRUCTION ON | LY (SUPPLEMENTAL) PAVEN | MENT DESIGN CALCULATIONS |
|--------------------------------|-------------------------|---|
| HMA Over | lay of Rubblized PCC | Unbonded Concrete Overlay |
| Use TF flexible = | 7.11 | Review 54-4.03 for limitations and special considerations. |
| District = | 3,4,5,6 | Neview 34-4.03 for infiliations and special considerations. |
| HMA Overlay Design Thickness = | 9.50 in. (Fig. 54-5.U) | JPCP Thickness = 999.00 inches |

| HMA Overlay Design Thickness = | 9.50 | in. (Fig. 54-5.U) | 1.0 | JPCP | Thickness = | 999.00 | inches | |
|---|-------------|---------------------|----------------|---------------|---------------|-------------|-------------|---------|
| | | | | CC | NTACT B | MPR FOR A | ASSISTAN | CE |
| DESIGN TABLES F | ROM BDE | MANUAL (| CHAPTER | 54 - PA\ | /EMENT | DESIGN | | |
| | | | | | | | | |
| Class I Roads | | Class II Roads | | C | lass III Road | ds | Class I | / Roads |
| 4 lanes or more | 2 lai | nes with ADT > 2 | 000 | | 2 Lanes | | 2 La | nes |
| Part of a future 4 lanes or more | One way | Street with ADT | <= 3500 | (A | DT 750 -200 | 00) | (ADT | < 750) |
| One-way Streets with ADT > 3500 | | | | | | | | |
| | Min. Str. I | Design Traffic (Fig | 1 54-2 C) | | | Class Ta | able for | |
| Facility Type | PV | SU SU | MU | | | One-Way | | |
| Interstate or Supplemental Freeway | 0 | 500 | 1500 | | | ADT | Class | |
| Other Marked State Route | 0 | 250 | 750 | 1 | | 0 - 3500 | П | |
| Unmarked State Route | No Min | No Min | No Min | | | >3501 | 1 | |
| | | | | L. | | | | |
| | Т | raffic Factor ESA | L Coefficients | | | Class T | able for | |
| | Rigid (F | ig. 54-4.C) | Flexible (F | ig. 54-5.B) | | 2 or 3 | lanes | |
| Class | Csu | Cmu | Csu | Cmu | | (not future | e 4 lane & | |
| PERSONAL PROPERTY OF A SECOND PROPERTY OF | 143.81 | 696.42 | 132.50 | 482.53 | | not one-w | ray street) | |
| II | 135.78 | 567.21 | 112.06 | 385.44 | | ADT | Class | |
| l III | 129.58 | 562.47 | 109.14 | 384.35 | | 0 - 749 | IV | |
| IV | 129.58 | 562.47 | 109.14 | 384.35 | | 750 - 2000 | III | |
| | | | | | | >2000 | II | |
| | | D | | | T 15 (F) | 54.0.D) | I | |
| | Design L | ane Distribution F | actors For St | uctural Desig | | J. 54-Z.B) | | |
| | | Rural | | | Urban | | | |
| Number of Lanes | Р | S | М | Р | S | М | | |
| 1 Lane Ramp | 100% | 100% | 100% | 100% | 100% | 100% | | |
| 2 or 3 | 50% | 50% | 50% | 50% | 50% | 50% | | |
| 4 | 32% | 45% | 45% | 32% | 45% | 45% | | |
| 6 or more | 20% | 40% | 40% | 8% | 37% | 37% | | |

| 31 PV = 10370 | SIONS 0 12 FT LANES (AV) 4 :1 FORESLOPES 0 FT GUTTER FLAG |
|--|--|
| S DATE: | 12 FT LANES (AV) 4:1 FORESLOPES 0 FT GUTTER FLAG |
| Total Color Transfer Transf | 12 FT LANES (AV) 4:1 FORESLOPES 0 FT GUTTER FLAG |
| S CHECKED BY: | 12 FT LANES (AV) 4:1 FORESLOPES 0 FT GUTTER FLAG |
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| To Limits of Analysis S39 + 00 TO STATION S39 + 00 TO STATION TO STATIO | 12 FT LANES (AV) 4:1 FORESLOPES 0 FT GUTTER FLAG |
| 11 STATION 839 + 00 TO, STATION 1016 + 00 OMISS | 12 FT LANES (AV) 4:1 FORESLOPES 0 FT GUTTER FLAG |
| 12 | 12 FT LANES (AV) 4:1 FORESLOPES 0 FT GUTTER FLAG |
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| 18 MUDIAN SHOR (RT) | |
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| 33 MU = 270 MU = 1500 MU = 34 DESIGN ADT = 10850 SELECT AN OPTION BELOW 36 SELECT AN OPTION BELOW 37 SELECT AN OPTION BELOW 38 ENTER 2 IF YOU WANT THICKNESS COMPS, ONLY ENTER 2 IF YOU WANT THICKNESS COMPS, ONLY ENTER 2 IF YOU WANT 45yr, LIFE CYCLE COST 39 JOINTED PLAIN, CONCRETE PAVEMENT 40 ESALS 7,9000 MILLION 41 ESALS 7,9000 MILLION 42 43 15 FT PCC PANEL THICKNESS FOR 44 | |
| 34 DESIGN ADT = 10850 SELECT AN OPTION BELOW SELECT AN OPTION | |
| SELECT AN OPTION BELOW | |
| STERT 2 IF YOU WANT FIRST COST ONLY ENTER 3 IF YOU WANT 45yr. LIFE CYCLE COST | |
| STATE STAT | |
| 39 30 30 30 30 30 30 3 | |
| 41 | |
| A1 | |
| 15 FT PCC PANEL THICKNESS FOR | |
| 15 FT PCC PANEL THICKNESS FOR TITED SHOULDER = 10,00 INCHES 144 | |
| A44 | |
| FIRST COST: \$7,852,812 | |
| 45 YR LIFE CYCLE COST: \$1,505,853 48 49 FLEXIBLE PAVEMENTS DESIGN 50 SINGLE LANE PAVING/SINGLE OR DUAL) 51 TV = 0.3555 MILLION TFf = 7.11 52 DESIGN AC MIXTURE TEMP = 73.4 DEG F (73 DEG MIN) 53 DESIGN Eac = 744 KSI DESIGN AC MIC 54 TOTAL THICKNESS = 11 IN SURFACE COURSE TO SURFACE COURSE TO SURFACE COURSE TO ANNUAL COST PER MILE: \$133,467 55 PERCENT DIF = (DIF IN COST)/(LOWEST COST) = 16.7% 59 CONTINUOUSLY/REINFRCED PAVEMENT 60 TV = 0.0000 MILLION EXTENDED LANE = 10.0001 61 EXTENDED LANE = 10.0001 62 15 FT PCC PANEL THICKNESS FOR TIED SHOULDER = 10.0001 63 UNTIED SHOULDER = 10.0001 64 UNTIED SHOULDER = 10.0001 65 UNTIED SHOULDER = 10.0001 66 UNTIED SHOULDER = 10.0001 66 UNTIED SHOULDER = 10.0001 67 UNTIED SHOULDER = 10.0001 68 UNTIED SHOULDER = 10.0001 69 UNTIED SHOULDER = 10.0001 60 UNTIED SHOULDER = 10.00 | |
| 48 | |
| ## FLEXIBLE (PAVEMENT DESIGN) 50 | |
| SINGLE TV = O.3555 MILLION TFf = 7.11 | |
| TV = 0.3555 MILLION TFf = 7.11 | <u> </u> |
| Total thickness | |
| DESIGN Eac = 744 KSI | |
| SURFACE COURSE | AC = 64-22 ICROSTRAIN = 69 |
| FIRST COST: \$8,732,211 TOP BINDER COURSE TO | |
| 45 YR LIFE CYCLE COST: \$2.198,029 | |
| Description | |
| 59 CONTINUOUSIY/REINFRCED/PAVEMENT 60 | |
| 60 | |
| | |
| 62 15 FT PCC PANEL THICKNESS FOR TIED SHOULDER = INCHE 63 UNTIED SHOULDER = INCHE | |
| [63] UNTIED SHOULDER= INCHE | |
| | |
| 64 | 160 |
| 65 FIRST COST: \$8,629,645 | |
| 66 45 YR LIFE CYCLE COST: \$475,114 | |
| 67 ANNUAL COST PER MILE: \$111.277 | |
| 68 PERCENT DIF =(DIF IN COST)/(LOWEST COST) = 2.8% = Jointed PCC | |
| 69 20.0% = HMA | |
| 70 | 1 1 |
| 71 JOINTED PLAIN CONCRETE PAVEMENT & UNBONDED JOINTED PLAIN CONCR | |
| 72 | RETE OVERLAY |
| | RETEOVERLAY |
| | |
| 75 UNIT PRICE BY: CHKD BY: COUNTY: COUNTY: | 734 ((IL 2) -1877-28-2 |
| 76 SPECIFICATIONS | 734 ((IL 2) -1&77-2B-2 |
| 77 NET LENGTH 17700 FEET 3.352 MILES | 734 ((IL 2) -1&77-2B-2 |
| 78 NUMBER OF TRAFFIC LANGE | 734 ((IL 2) -1&77-2B-2 |
| 79 NUMBER OF TRAFFIC LANES 4 LANE WIDTH (AVE) = 12 FT 80 RURAL | 734 ((IL 2) -1&77-2B-2 |
| 81 GUTTER FLAG WIDTH (FT) = 0 PAVED SHLD WIDTH (TOTAL) = 28 FT | 734 ((IL 2) -1&77-2B-2 |
| 82 - AVED STEE VISITI (1016) - 2011 | 734 ((IL 2) -1&77-2B-2 |

| 10 | C LIMITS OF ANALYS | D D | E | F | G | H | 1 | J | К | L | M |
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| 11 | STATION | 839 + 00 | TO STA | TION | 1016 + 00 | · | 10 | MISSIONS | | ٥٢ | |
| 12 | NET LENGTH | 17700 | | 3.352 | | | ┪ | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | ľГ | 一 |
| 13 | 17514555 | L | | | | | ╗ | Ĺ | | | |
| 83 | HEMIZED CO | NSTRUCTIO | N COST | - JOINTED PLAIN C | ONCRETE PAVEMI | ENT [| | | i | | . |
| 84 | QUANTITY | 11417 | | | | | | | | | |
| 85 86 | | UNIT SQ. YD, | 46 | ITEM | 1 Ph IP- | | | IT COST (| | COST | 1.53 |
| 87 | <u> </u> | 30. 10. | 10 | INCH JOINTED PCC MAIN | LINE | <u> </u> | - 122 | \$44.85 | <u>=</u> _ | \$4,233,840 | |
| 88 | Ō | SQ. YD. | 4 Inch Stabil | zed Sub-Base +++ | | | 2703 | \$11.10 | = | \$0 | 13.2 |
| 89 | | | | | | | U.S.2252 | | | | 0.1 |
| 90 | 153400 | SQ. YD. | | oved Sub-Grade (CA) ++ | | | | \$11.10 | = | \$1,702,740 | |
| | | | tit - Corr | bined into 16 Inch Composit | e Aggregate Laver the ton a | 4" will be CA 6 or 0 | :Δ 1Ω | over | | | |
| | • | | minimum 12 | of crushed Breaker Run, (6 | " top size, 70-90% by wt. pa: | ssing 4" sieve and | d15-4 | 10% by wt. | | | F: |
| 91 | | | passing 2" s | ieve). <u>District Two Geotech</u> | incal Engineer Recommenda | ation. | | • | | | 4.17 |
| 92 | | | | | | <u> </u> | 1 | | | | · R |
| 93 | 55067 | SQ. YD. | 10 | INCH PCC SHOULDER | | | | \$34.80 | = | \$1,916,332 | S |
| 94 | | |] | | | | <u> </u> | | | | |
| 95 96 | . 0 | SQ. YD. | . 0 | inch - HMA Surface Remova | al | | | \$1,50 | _=_ | \$0 | С |
| 97 | 0.0 | TON | ı | inch - HMA BINICES | 7000 | 0.00 11.40.0 3170 | 1255 | MAE ON | | | oʻ |
| 98 | 0.0 | 1 | ı " | inch - HMA BINDER, | PGb | 2-28, IL19.0, N70] | | \$45.00 | = | \$0 | S |
| 99 | 0.0 | TON | . 0 | inch - HMA LEVEL BINDER | | PG ???? | | \$45.00 | = | \$0 | Ţ |
| 100 | | 100 100 | } | | | | | | | | S |
| 101 | 0 | SQ. YD. | 0 | inch - Pavement Removal | | | _ | \$9.00 | = | 50 | (編) |
| 103 | n | CU, YD. | ۸ ۱ | inch - Earth Excavation | | | 3362 | \$11.50 | = | \$0 | |
| 104 | | |) | NOTE: assumes 26" new F | vt less removal of 13.5" equ | als 12.5 of Farth | | | | \$0 | 13 PM |
| 105 | | | <u> </u> | | | | Ť | | <u> </u> | L· | 識辭 |
| l | | 1 | | TOTAL | OST OF ORIGINAL JOINT | ED PAVEMENT C | UNS. | TRUCTION | _ | \$7,852,912 | |
| 106 107 | | | ļ | ·OIAL | TOOT OF OMBINAL SOME | LD FATERICITY O | U110 | INCONTON | | 41,002,312 | 1 23 |
| | DDESENT CO | OFF OF FILE | LIDE MAA | INT. AND REHABIL | TATIONINGON | <u> </u> | | W-1 | | <u> </u> | ļ . |
| 109 | FINESERI GC | JOINTED PLAIN | ONCE WA | IN I. AND REHABIL | HATION WORK | | | | <u> </u> | · · · · · · · · · · · · · · · · · · · | ↓ |
| 110 | 7.1 | UNIT | CONCRETE | ITEM | | | \vdash | | | UNIT COST | |
| 111 | 94400 | SQ. YD. | FULL-DEP1 | H PCC PAVEMENT PATCH | ING. Class B | | | | | \$135.00 | |
| 112 | | · · | | Activity 1, 2, 3, 4, 5, and 7. | | | | | 1 | | T- |
| 113 | 44004 | TON | | | | , | | | ļ | | |
| 114 115 | 11894 | ITON | POLICY HA | A OVERLAY of PAVEMENT Activity 5 | (See BDE Chapter 53-4,04 | for thickness) | | | ├ | \$88.40 | Ļ |
| 116 | | | | Poly, HMA SC, MIX D, N70 | 1 | 2,25 | 11 | NCHES | ┼─ | · | - |
| 117 | | | |] | | 2,20 | 11" | NOT ILLO | | | +- |
| 118 | | TON | POLICY HA | A OVERLAY of SHOULDES | R (See BDE Chapter 53-4.04 | for thickness) | | | | \$81:90 | <u> </u> |
| 119 | | <u> </u> | ļ | Activity 5 | , | | | | ļ | | |
| 121 | | <u> </u> | | HMA SC, MIX C, N50 |) | 2.25 | 1 1 | NCHES | - | | ┼ |
| 122 | 70800 | LIN. FT. | RANDOM | RACK ROUTING & SEALIN | √G | + | ╂╌╂╾ | | 1 | \$1.25 | ₹ |
| 123 | | | | | uting and sealing, assume 1 | 00 ft/station per la | ne | | | | <u>†</u> |
| 124 | | ļ | | Activity 6 and 7 | | | П | | | | |
| 125 | 56640 | LIN. FT. | DEEL COTO | E TRANSVERSE OR LOK | 2017012 4 6541 010 | | 11 | | ļ | | اور |
| 127 | 30040 | | KEFLEUII | VE TRANSVERSE CRACK I | ROUTING & SEALING Joint spacing = | _ • 15 | 닉 | EET | +- | \$1.00 | å |
| 128 | <u>-</u> - | | | Trouvery O Esta 1 | John Spacing - | ``\ | ′r - | <u> </u> | + | | ┼─ |
| 129 | 94400 | SQ. YD. | PARTIAL-D | EPTH PAVEMENT PATCH | ING | 2.50 |) <u> </u> [| nches | \bot | \$42.00 | ā' |
| 130 | | - | <u> </u> | Activity 6 and 7 | | Poly, HMA SC, | | | _ | | |
| 131 132 | | | - | (Mill & Fill Surface - Interst | ate; Mill & Fill 2.50 inNor | n-interstate) | + | | | | + |
| 133 | 70800 | LIN. FT. | LONGITUE | I DINAL SHOULDER JOINT R | OUTING AND SEALING | | ++- | · · · · · · · · · · · · · · · · · · · | + | \$0.80 | <u>لــــــــــــــــــــــــــــــــــــ</u> |
| 134 | | | | Activity 3, 6 and 7 | TO THE OUTCOME | 1 | ++ | *** | + | | 1 |
| 135 | | | | | | | 耳 | | | | |
| 136 137 | 35400 | LIN, FT. | CENTERL | NE JOINT ROUTING AND | SEALING | | ЦΤ | | | \$0.95 | <u> </u> |
| 138 | | | | Activity 3, 6 and 7 | | | ╫ | | | | |
| 139 | | SQ. YD. | FULL-DEP | TH PCC SHOULDER PA | TCHING, Class C | | + | · · · · · · · · · · · · · · · · · · · | | \$125.00 | J.L |
| 140 | | | | Activity 3, 4 and 5 | | | 11 | | | | * |
| 14 | | | | | | | П | | | | 1 |
| | I MAINTE | ENANCE AND | REHAB | ILITATION ACTIVIT | Y for JOINTED PLA | IN CONCRE | TE, | AND | | } | |
| 14: | 1 | | | TED PLAIN CONCE | | | | | | | |
| 14 | | | 1 | | T | | | • | 一 | | + |
| | REHABILITATI | ON ACTIVITY 1 | - VEAD 1 | n | + | - | ++ | | | | |
| 14 | | <u> </u> | L-AR | | | | | | \dashv | | + |
| 14 | 3 94 | SQ. YD, | 0.109 | 6 FULL-DEPTH PCC PAVE | MENT PATCHING, Class E | 3 | ╁ | \$135.0 | 0 = | \$12,69 | ō |
| 14 | | | | | | ST OF REHABILIT | <u>ATIO</u> | | | \$12,69 | |
| | REHABILITATI | ON ACTIVITY 2 | - YEAR 1 | 5 | | | | | | | |
| 14 15 | 40. | SQ. YD, | | VENUE DEDAMENTO DE COMP | MENT DATOLUSIS ST | | Ц | */^* | _ _ | | |
| 15 | | 3 34. 10. | 0.20 | 6 FULL-DEPTH PCC PAVE | | | <u>,,,,</u> | \$135.0 | | \$25,51 | |
| 15 | | | | | IOTAL COS | ST OF REHABILIT | ATIO | MACHVITY | 4 | \$25,51 | - |
| تبنيه | | | | | , | _ (| | | | | |

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| 100 | C LIMITS OF ANALYS | D | E | F | G | н п | J | К | | М |
| 11 | STATION | 15 839 + 00 | TO STA | TION | 1016 + 00 | | OMISSIONS | | ٥ | |
| 12 | NET LENGTH | 17700 | | 3.352 | | | OMISSIONS | | ٦ | \dashv |
| 13 | | [| | | | | | | | |
| | REHABILITATIO | N ACTIVITY 3 - | YEAR 20 | | | | i | | | \neg |
| 154 155 | 1000 | 00.70 | | | | | | | | = |
| 156 | 1888 | SQ. YD. | 2.00% | FULL-DEPTH PCC PAVEME | ENT PATCHING, Class B | | \$135.00 | _=_ | \$254,880 | |
| 157 | 275 | SQ. YD. | 0.50% | FULL-DEPTH PCC SHOU | ILDER PATCHING Class C | | \$125.00 | -=- | \$34,375 | \dashv |
| 158 | | | 0.0070 | - GHE DEI III 1 GO GROC | EDERT ATOLING, Class C | | \$120.00 | | 404,070 | \dashv |
| 159 | 70800 | LIN. FT. | 100.00% | LONGITUDINAL SHOULDE | R JOINT ROUTING & SEAL | ING | \$0.80 | 22 | \$56,640 | \neg |
| 160 161 | 35400 | LIN. FT. | 100.0097 | CENTED INE (ONE DOUT | NO 5 OF ALLING | | **** | | | \Box |
| 162 | 30400 | EIN. FT. | 100.00% | CENTERLINE JOINT ROUT | | OF DELIABILITAT | \$0.95 | <u>-</u> | \$33,630 | |
| 163 | <u></u> | | | | TOTAL COST | OF REHABILITAT | ION ACTIVITY 3 | - | \$379,525 | |
| 164 | REHABILITATIO | N ACTIVITY 4 - | YEAR 25 | | | | | | | 一 |
| 165 | | | | | | | | | | |
| 166 167 | 2832 | SQ. YD. | 3.00% | FULL-DEPTH PCC PAVEM | ENT PATCHING, Class B | | \$135.00 | = | · \$382,320 | |
| 168 | 551 | SQ. YD. | 1.00% | FULL-DEPTH PCC SHOU | II DED DATCUING Class C | | \$125.00 | = | \$68,875 | |
| 169 | | | 1.0070 | TOLE-DEFITT FOO SHOC | | OF REHABILITAT | | ┝╌┝ | \$451,195 | <u> </u> |
| 170 | | | | | 101/12 0001 | OF REFIABLETIAT | | | 4401,100 | - |
| | REHABILITATIO | N ACTIVITY 5 - | YEAR 30 | | 7 | | | | | |
| 172 | | 50 VD | . 222 | | | | | | | |
| 173 174 | 3/76 | SQ. YD. | 4.00% | FULL-DEPTH PCC PAVEM | ENT PATCHING, Class B | | \$135.00 | = | \$509,760 |] |
| 175 | 826 | SQ. YD. | 1.50% | FULL-DEPTH PCC SHOU | II DER PATCHING Clare C | - | \$125.00 | = | \$103,250 | |
| 176 | | | 1,0070 | | ZENEW LUTOUING, OIGSS C | | \$120.00 | | 9103,230 | |
| 177 | 11894 | TON | | POLICY HMA OVERLAY O | | 2.25 | \$88,40 | = _ | \$1,051,430 | |
| 178 179 | | | | (See 53-4.04 for required the | ckness) | | | | | |
| 180 | 6938 | TON | 100.00% | POLICY HMA OVERLAY O | E CUOLILIDED |] 2,25 | \$81,90 | = | ecco ana | <u></u> |
| 181 | | | 100.0070 | (See 53-4.04 for required th | |] <u>2.2</u> 3 | \$01.50 | ┤╶ ╌╞ | \$568,222 | - |
| 182 | | | | teen on the tot todates at | | OF REHABILITAT | TON ACTIVITY | | \$2,232,662 | |
| 183 | | | | | | | | | | |
| 184 | REHABILITATIO | N ACTIVITY 6 - | YEAR 35 | | | | | 1 | | |
| 185 186 | 70800 | LIN, FT. | 100.00% | LONGITUDINAL SHOULDE | D JOINT DOUTING & OF A | 100 | 80.00 | = | 250.040 | |
| 187 | 70000 | 5411.11. | 100.00% | LONGI TODINAL SHOULDE | R JOINT ROUTING & SEAL | ING | \$0.80 | - | \$56,640 | |
| 188 | 35400 | LIN. FT. | 100.00% | CENTERLINE JOINT ROU | & SEAL | | \$0,95 | = | \$33,630 | ┤ |
| 189 | | | • | | | | | | | |
| 190 | 35400 | LIN. FT. | 50.00% | Randon Crack Routing & Se | aling (See Note) | ļ | \$1.25 | = | \$44,250 | Ļ |
| 192 | 22656 | LIN, FT. | 40 00% | Reflective Transverse Crac | Posting & Sealing | | \$1.00 | = | \$22,656 | ├─ |
| 193 | | | 40.0071 | Treffective Traffaverse Ofac | K Nouting & Sealing | + | \$1.00 | ╁ | \$22,030 | |
| 194 | 94 | SQ. YD. | 0.10% | PARTIAL-DEPTH PAVEME | | 2.50 | \$42.00 | = | \$3,948 | |
| 195 | | · | | (Mill & Fill Surface - Intersta | | | · | | | |
| 196 | | | | <u> </u> | TOTAL COST | OF REHABILITA | TION ACTIVITY | 3 | \$161,124 | ╄ |
| 198 | REHABILITATIO | N ACTIVITY 7 | VEARAN | <u> </u> | | 1 | _ | | | ┽—— |
| 199 | | | WALL | | | | | | | + |
| 200 | 472 | SQ. YD. | 0.50% | FULL-DEPTH PCC PAVEN | ENT PATCHING, Class B | | \$135.00 | = | \$63,720 | <u> </u> |
| 201 | 70900 | LIN ET | 100.000 | LONOITUDBILL | TO TODAY SALES | 1110 | | | | \perp |
| 203 | 10800 | LIN. FT. | 109.00% | LONGITUDINAL SHOULD | <u>ER JOINT ROUTING & SEA</u> T | LING | \$0.80 |) = | \$56,640 | +- |
| 204 | 35400 | LIN. FT. | 100.00% | CENTERLINE JOINT ROU | T & SEAL | <u> </u> | \$0.9 | ; = | \$33,630 | + |
| 205 | | | | | T . | <u> </u> | | | | |
| 200 207 | 33984 | LIN. FT. | 60.00% | Reflective Transverse Crac | k Routing & Sealing | | \$1.0 |) = | \$33,984 | |
| 201 | 35400 | LIN, FT. | Ens/ | Randon Crack Routing & S | Agling (Can Mate) | | 64.0 | 5 = | 844.000 | |
| 208 209 210 | 33400 | | 30% | Indiana Clack Routing & S | caming (See 140(e) | | \$1.2 | <u> </u> | \$44,250 | +- |
| 210 | 472 | SQ. YD. | 0.50% | PARTIAL-DEPTH PAVEMI | | سا 2,50 | \$42.0 |) = | \$19,824 | + |
| 211 | | <u> </u> | | (Mill & Fill Surface - Interst | ate; Mill & Fill 2.50 lnNon- | Interstate) | | | | 7 |
| 212 | | | <u></u> | ļ | • | T OF REHABILITA | | | \$252,048 | 4 |
| 213 | | DETERMINAT | ION | JOINTED PLAIN CONCRE | TE PAVEMENT & UNBON | DED JOINTED PLA | AIN CONCRETE | OVERL | <u>AY</u> | |
| 214 | | | | | | - | | | ļ | 4— |
| 214 | PRESENT WOR | TH CALCULAT | IONS . | to interpret the rates | <u></u> | | - | | | |
| 21 | | TH CALCULAT | | | | - | | + | | + |
| 21 | | | | TOTAL | OST OF ORIGINAL P | AVEMENT CO | VSTRUCTION | ┌╎╴╤ | \$7,852,912 | <u>-</u> |
| 219 | 9] | <u> </u> | | } | OUT OF GRIGHTAL F | TELLICITY OOI | 1 | + - | 4.10021917 | + |
| 22 | PRESENT WORTH | I: REHABILITATIO | N ACTIVITY | 1 - YEAR 10 | | \$12,690 | X 0.744 | 1 = | \$9,443 | 3 |
| 22 | | 1 | 11.10 | | | | | | | |
| 22 22 22 22 | | REHABILITATIO | N ACTIVITY | 2 - YEAR 15 | | \$25,515 | X 0.641 | 9 = | \$16,378 | 3 . |
| 22 | d | REHABILITATIO | N ACTIVITY | 3 - VEAR 20 | | \$379,525 | X · 0.553 | 7 = | \$210,143 | 2 |
| 22 | 51 | | | - 16m36V | + | 4019/050 | 11 0.00 | ` - | Ψε 10, 14, | + |
| 22 | 5 | REHABILITATIO | N ACTIVITY | 4 - YEAR 25 | | \$451,195 | X 0.47 | 6 = | \$215,49 | 1 |
| 22 | 7] | | | 1 | | | | | | |

| | с | | | | | | ., | | | | |
|------------|---|---|-------------------------|--------------------------------|--|--|--------------|--|--|--|--|
| 10 | LIMITS OF ANALYS | D IS | E | F | G | Н | 4 | J | K | <u> </u> | М |
| 11 | STATION | 839 + 00 | TO STA | | 1016 + 00 | | † | OMISSIONS | | ٥ | |
| 12 | NET LENGTH | 17700 | FEET | 3.352 | MILES | | | | | | |
| 13 228 | | REHABILITATION | ACTIVATY 5 | VEAD 20 | | | ᆡ | 0.4120 | | £040 0.57 | |
| 229 | | KETIABILITATION | ACTIVITION | - 1EAR 30 | - | \$2,232,662 | 쑤 | 0.4 120 | == | \$919,857 | |
| 230 | | REHABILITATION | ACTIVITY 6 | - YEAR 35 | | \$161,124 | प्रो | 0.3554 | - I | \$57,263 | |
| 231 | | | | | | | | | | | |
| 232 233 | | REHABILITATION | ACTIVITY 7 | - YEAR 40 | | \$252,048 | X | 0.3066 | = | \$77,278 | |
| | | | | | | | | | | | |
| 234 | | | | | TOTAL REHABILITAT | ION COST (PRE | SE | NT WORTH) | = | \$1,505,853 | |
| 235 | | | | | | | 1 | | | | |
| 236 | ANNUAL COS | T PER MILE | CALCUL | ATION - | | 2.22 | | | | | |
| 237 | | (JOINTED PLAIN | CONCRETE | PAVEMENT & UNBONDED | JOINTED PLAIN CONCRET | E OVERLAY) | | | 1. | | |
| 238 | | | | | | | П | | | | |
| 239 | Annual Cost per | Mile ==> A = D | + M +CRF | n x [C + R1(PWFn1) + | R2(PWFn2) + + Rn(| PWFnn) 1 | П | | | , | |
| 240 | | D = Admin & Ove | erhead per i | nile; M = total annual | maintenance cost per mile | | | | | | |
| 241 | | С | = Initial Cor | struction Cost per mile = | | | | | | | |
| 242 | | | | | \$ 66.00 | Annually per N | iile | | | | |
| 243 | | ODE/45) - 75 | 00/4 - 0.000 | CRF(n) => n= number of yea | | | \sqcup | | - - | | \square |
| 244 245 | | UKF(45) = {0. | ua(1+0.03) [*] | 45} / [(1+0.03)^45 - 1] = | U,U4U/851/6 | | ╢ | | - | | |
| 246 | | | | | | | Н | | | | +- |
| | Rehabilitation cost p | er mile and capital | Recovery fac | tor | | | Н | - UPAN | | | $\vdash \vdash$ |
| 248 | R1(PWF10) = | \$9,443 | \$2,817 | | | | H | | | | |
| 249 | R2(PWF15) = | 1 | \$4,886 | | A = = | \$==114,367,72 | | annual cost pe | r mile | | |
| 250 | R3(PWF20) = | | \$62,687 | | | | | | | | |
| 251 252 | R4(PWF25) = | 7.2.2.1.2.1 | | | | - | | | 1 | | \sqcup |
| 252 | R5(PWF30) = R6(PWF35) = | | | | • | | <u> </u> | | | · | { |
| 254 | | | | | | ANNUAL C | SC | T PER MILE | = | \$114,368 | \vdash |
| 255 | | | \$449,204° | <u> </u> | | 1 | | l . | | ** | |
| | *************************************** | *************************************** | | VEMENT & UNBONDE | NONTED DI AINI CON | ICPETE OVE |) i | ^~ | | | ┼──-{ |
| 257 | | D FLAIN CONC | I | AEMICIAL & OMPOMPER | O JONATED PLANA CON | ICRETE OVE | | | ┼ | . " | |
| 207 | VERTON CONTRACTOR AND ADDRESS OF THE PROPERTY | | Participation and the | | | | er eggs | | L | | |
| 258 | | H HWY FA/ | EMEN. | & HMA OVERL | AY OF RUBBLIZE | DPCC PA | ١V | EMENT: | | | 1 1 |
| | DATE: | 03/26/12 | | TRAFFIC LANES | ROUTE: | | Ţ | FAP 734 ((IL: | | | |
| | QUANTITIES BY: UNIT PRICE BY: | Sam Abdullah | CHKD BY: | | SECTION: | | ٠ | 77-2-1&77-2B | -2 | | <u> </u> |
| | SPECIFICATIONS | ļ | CHAD BY. | | COUNTY: | | ┿ | COUNTY | 1 | | ' |
| 263 | | | <u> </u> | | | | † | | | | |
| 264 | | NET LENGTH | 17700 | FEET | 3,352 | MILES | Ţ | | | | |
| 265 | NUMBER OF TRAF | EIC I ANEC | ļ | | I AND MURTING AND | | | <u> </u> | | | <u> </u> |
| 267 | | FIC LAINES | RURAL . | | LANE WIDTH (AVE) | 1 | 2 F | | 1 1 | | ╁ |
| | PLACE A 1 OR 2 | 1 | | E LANE PAVING 2 = DUAL | LANE PAVING | | 十 | | | | - |
| . 269 | |] | | | | ļ | T | | | | |
| 270 271 | GUTTER FLAG WI | DIH (FT) | (|) | BIT SHOR WIDTH (TOTAL) |) 2 | 8 F | <u>T</u> | 4— | | |
| | 1 | | - | | | | + | | | | + |
| | ITEMIZED (| | TION C | | , , | <u> </u> | | | | | |
| 273 | QUANTITY | UNIT | <u> </u> | ITEM | | | Ţ | UNIT COST | | COST | _ |
| 274 275 | 94,400.00 | SQ. YD. | | Inch - HMA FULL DEPTH! | | <u> </u> HMA, Mix 'D', N7 | 뉘 | \$49.9 | <u> </u> | \$4,715,28 | 4 |
| 276 | 3 | + | | Inch - Top Binder | | MMA, MIX 10°, N7 4 BC, IL 19.0, N7 | | | _ | | - |
| 277 | 71 | | | Inch - Lower BINDER: | Lower TWO Lifts - HM | | | | | | |
| 278 | 3 | 100 100 | | | <u> </u> | | 1 | | | | F |
| 279 280 | 153,400,00 | 15Q. YD. | 1 | inch -improved SUBGRAD | E, Type CA | - | - | \$11.1 | 0 = | \$1,702,74 | _ ' |
| 28 | | SQ. YD. | | L | | _! HMA, Mix 'D', N' | 70 70 | \$37.5 | 0∄ = | \$2,065,01 | R |
| 28: | 2 | | ٔ ا | THE THE PERSON NAMED IN COLUMN | | | آ | | | + 2,555,51 | S T |
| 28: | | TON | | Bituminous Materials (Prin | ne Coat) — 2 coats | | | \$750.0 | 0] = | \$224,25 | O ' |
| 284 | 4 | G TON | | ACODEC ATT (T) | 1 | | 1 | | | | - c |
| 28 | 5 224-20 | I I UN | 1 | AGGREGATE (Prime Coa | <u>U</u> | | \dashv | \$22.0 | 0/ = | \$4,92 | 8 0 |
| 28 | | EACH | + | Test Strip - Ask Steve He | fel | | + | \$5,000.0 | 0. = | \$20,00 | 0 S |
| 28 | 8 | | | | | | | | | | l I |
| 28 | 9 - | SQ. YD. | 0.00 | inch - HMA Surface Remo | val | | \Box | \$2.0 | 0 = | ļ | 5 S |
| 29 29 | 1 | 180 VD | J ,, | Inch Dougenest Comment | <u></u> | _ | | | <u> </u> | | 02 |
| 29 | | SQ. YD. | 0.00 | inch - Pavement Removal | | | \dashv | \$11.0 | <u>=</u> {0¢ | | 0 |
| 29 | 3 - | CU. YD. | سا ا0.00 | inch - Earth Excavation | | | 1 | \$ 27.511. | 0 = | | 0 |
| 29 | 4 | | | | new Pvt less removal of 13.5 | equals 10.5 of | Ear | | | | |
| | | | | | TOTAL COST OF ORIG | INAL PAVEMEN | T C | ONSTRUCTIO | N: = | \$8,732,2 | 11 |
| 29 29 | | + | - | | | | | | | 1 | - |
| [23 | <u> </u> | 1 | 1 | 1 | i | | | | | 1 | ! |

| | С | D | E | F | G | ъ Г | П | | кТ | L I | м |
|-----------------|-----------------------|-------------------|--------------|--|------------------------------------|----------------------|--------------|---|----------------|---|------------------------|
| | LIMITS OF ANALYS | | | <u>Г</u> | | <u> </u> | + | | | <u> 1</u> | - IVi |
| 11 | STATION NET LENGTH | 839 + 00 17700 | | | 1016 + 00 | | 7 | OMISSIONS | | ٥٦ | |
| 13 | NET CENGIA | 17700 | FEET | 3,352 | MILES | | + | | | | \dashv |
| 297 | PRESENT CO | STS OF FUT | URE MAI | NTENANCE AND R | EHABILITATION W | ORK | ヿ゙ | | | | \neg |
| 298 | | | | | | | | | | | \Box |
| 299 300 | 19,824.00 | UNIT | | ITEM y - Pavement | | | | 3.75 | <u> </u> | UNIT COST | |
| 301 | 13,024.00 | TON | | Activity 6 | | I PHMASCDN70 | ה | 3.75 | | \$88,50 | \dashv |
| 302 | | | | (3.75 in Standard Design; | 2.00 in. Limiting Strain Crite | | | | | | |
| 303 304 | 5,396.53 | TON | UMA Overte | y - Shoulder | | | ┙ | 1.75 | | \$82.351 | |
| 305 | 0,000.00 | 104 | HINA OVER | Activity 6 | **** <u>*</u> | HMA SC Ç N50 | ٦ | 1.75 | 19. | 1007-202 -302-33 | |
| 306 | | | | (1.75 in Standard Design; | 2.00 in. Limiting Strain Crite | | | | | | \Box |
| 307 308 | 70800 | LIN. FT. | LONGITUD | NAL SHOULDER JOINT RO | NITING AND CEALING | | \dashv | | i | \$0.80 | |
| 309 | 1000 | | LONGITOD | Activity 1, 2, 4, 5, 7, and 8 | OTHING AND SCALING | | + | | | 15 CARES 15 CARES | -1 |
| 310 | 27.00 | | | | | | | | | | \Box |
| 311 | 35460 | LIN. FT. | CENTERLI | NE JOINT ROUTING AND SI Activity 1, 2, 4, 5, 7, and 8 | EALING | | ┝┥ | | | \$0.95 | |
| 313 | | | | 112, 4, 5, 1, 4, 6 | | | | | | | |
| 314 315 | 77880 | LIN. FT. | RANDOM / | THERMAL CRACK ROUTIN | G AND SEALING (assume | 110 ft/slation per | lan | e) | | ¥\$1.00 | |
| 316 | · | | | Activity 1, 2, 4, 5, 7, and 8 | | ļ | Н | | - | | |
| 317 | 55,066.67 | SQ. YD. | PARTIAL-D | EPTH SHOULDER PATCHI | NG (As follows) P | avement Design - | П | standard | | \$35.00 | |
| 318 319 | | | | Activity 6 Standard Design ==> Mill 8 | Eill Surface | 2 | 1 [| INCHES | | | |
| 320 | | <u> </u> | <u> </u> | Limiting Strain Design => 'N | |] 2 | | HMA SC C N50 | | | $\vdash \vdash$ |
| 321 | 218 16- 1- | 00.000 | | | | | | | | | |
| 322 323 | 149,466.67 | ISQ. YDS. | 12-INCH MIL | LING - Pavement & Shoulde Activity 3 | τ | | H | | | \$2.10 | \vdash |
| 324 | | | | | | | ╁┤ | | | | |
| 325 326 | 94400 | SQ. YDS. | | LING (note) | Pavement Design - | standard |] | HMA SC REM | 2" | \$2.00 | |
| 326 | | | NOTE: Pay | rement only - <u>Standard</u> ==: Activity 6 | = Pavement & Shoulder - <u>Lir</u> | miting Strain | + | *************************************** | | | |
| 328 | | 1 | | | | | L | | | | |
| 329 330 | 10,572.80 | ITONS - | 2-INCH H | MA OVERLAY PAVEMENT Activity 3 | | P HMA SC mix 1 | 믿 | 70 | | \$87.90 | |
| 331 | | | | Activity 5 | | 1 | ╁ | <u> </u> | | | $\vdash \vdash \vdash$ |
| 332 | 6,167.47 | TONS | 2-INCH H | A OVERLAY SHOULDER | | HMA SC mix C | N <u>5</u> (|) | <u> </u> | \$82.60 | |
| 333 334 | | | | Activity 3 | | - | + | 1 | | | ┼─┤ |
| 335 | 94,400.00 | SQ. YDS. | PARTIAL-D | DEPTH PAVEMENT PATCH | NG (Mill & Fill Surface) | 1 | + | | | | \vdash |
| 336 | | | ļ | Activity 1, 2, 4, and 5 | 2" - HMA SC REM, 2" - F | | | | | \$41.00 | |
| 337 338 | | - | | Activity 7 and 8 | ູ 3,75" - HMA SC REM, 3." ໆ | 75" - P HMA SC (| N C | 70, | | \$ 56.00 | - |
| 339 | 94,400.00 | SQ. YDS. | PARTIAL-E | EPTH PAVEMENT PATCH | | | | | | \$26.00 | al de la company |
| 340 | | | | Activity 3 and 6 | HMA SC REM 2", 2"- P H | MA BC IL-19 N70 | _ | | 1 | | |
| 342 | | | | 1 | | + | ╁ | <u> </u> | ┼ | | + |
| 343 | MAINTENAN | CE AND REF | ABILITA | TION ACTIVITY CO | ST - FLEXIBLE PAV | 'EMENT | 1 | | | | |
| 344 | | Τ | 1 . | | | T | 7 | | | 1 | |
| 345 | REHABILITATION | ON ACTIVITY 1 | - YEAR 5 | | | - | + | | Ľ | | |
| 346 | 4 | LIN ET | 400.00 | (I OLIO PER INCLES | | | 1 | | | **** | = |
| 347 | | LIN. FT. | 100.009 | 6 LONGITUDINAL SHOULD | JER JOINT ROUTING & SEA | ALING | - - | \$0.80 | # | \$56,640 | 1 |
| 349 | 35400 | LIN. FT. | 100.009 | 6 CENTERLINE JOINT ROL | JT & SEAL (SINGLE LANE I | PAVING) | 1 | \$0.95 | = | \$33,630 | 1 |
| 350 351 | 1 | LINET | E0.000 | (DANDON (THEONER) OF | ACK BOUTING AND CO. | INC | T | 04.00 |) = | 630 044 | |
| 352 | | LIN. FT. | 50,00% | 6 RANDOM / THERMAL CI | RACK ROUTING AND SEAL | _BYG | -+ | \$1.00 | | \$38,940 | <u>'</u> |
| 353 | 94 | SQ. YDS. | 0.109 | A PARTIAL-DEPTH PAVEN | | | 1 | \$41.00 |) = | \$3,854 | 1 |
| 354 35 | | | | (Mill & Fill Surface) | 2 inches | T OF BEUARUS | Ţ | IOM ACTIVITY | 1 | 8422.00 | |
| 35 | | | | 1 | IOTAL COS | T OF REHABILIT | 7 | TOWACTIVITY | + | \$133,06 | + |
| 35 | REHABILITATI | ON ACTIVITY 2 | - YEAR 1 | 0 | | | _ | | | | |
| 35 | 3 | | | - | | 141,110 | 4 | | | 650.07 | |
| 35 ¹ | 70800 | LIN. FT. | 100.00 | % LONGITUDINAL SHOULI | JER JOINT ROUTING & SE | ALING | + | \$0.80 | 0 = | \$56,64 | - |
| 36 | 35400 | LIN. FT. | 100.00 | CENTERLINE JOINT RO | UT & SEAL (SINGLE LANE | PAVING) | \exists | \$0.9 | 5 = | \$33,63 | 0 |
| 36 | 2 2004 |) I IN ET | £0.00 | DANDOM (TUTOLIS) | DAOK BOUTING AND COL | LINC | 1 | 64.0 | 1 - | 630.04 | |
| 36 36 | 38940 | LIN. FT. | 00,00 | % RANDOM / THERMAL C | HACK ROUTING AND SEA | LING | - | \$1.0 | 0 = | \$38,94 | |
| 36 | 472 | 2 SQ. YDS. | 0.50 | % PARTIAL-DEPTH PAVE | MENT PATCHING | | | \$41.0 | 0 = | \$19,35 | 2 |
| 36 | | | | (Mill & Fill Surface) | 2 inches | OT OF PELLAND | | FIONI ACTIVITY | _ | \$4.4B.50 | 2 |
| 36 36 | | | | | TOTAL CO | ST OF REHABILI | | HON ACTIVITY | 4- | \$148,56 | - |
| | REHABILITATI | ON ACTIVITY | B - YEAR | 5 | | | T | | | | |
| 37 | 0 | | | | | | | | | 4045 5 | |
| 37 | 1 14946 | 7 SQ. YDS. | 12-INCH N | IILLING - Pavement & Shoul | der | | | \$2.1 | 0 = | i \$313,88 | 37 L |

| 10 | C LIMITS OF ANALYS | D SIS | E | F | G | Н | 1 | <u> </u> | к | | M |
|--|-----------------------|----------------|--|--|---------------------------|-----------------------------|-------------------|---------------|----------------|-----------------------|----------------------|
| 11 | STATION | 839 + 00 | TO STA | TION | 1016 + 00 | | ОМ | ISSIONS | | o ^L | |
| 12 | NET LENGTH | 17700 | | 3.352 | MILES [| · - | 1 2 | 10010110 | | Ī | |
| 13 372 | | | | | | |] | | | | |
| 373 | 944 | SQ. YDS. | 1.0004 | PARTIAL-DEPTH PAVEMEN | IT DATOUNG | | - | 500.00 | | | |
| 374 | | 04. 100. | 1,00,70 | (Mill & Fill Additional 2,00 in | | | | \$26,00 | | \$24,544 | |
| 375 | | | | | 3.07 | | 1 | | | | $\neg \dashv$ |
| 376 377 | 10573 | TONS | 2-INCH HM. | A OVERLAY PAVEMENT | | | | \$26.00 | = | \$274,898 | |
| 378 | 6167 | TONS | 2-INCH HM | A OVERLAY SHOULDER | | | - | \$82.60 | # | \$509,394 | |
| 379 | | | 2 11017 11110 | NOVERENT STROUBLES | | | +- | \$02.00 | <u></u> | \$509,594 | |
| 380 | | | | | TOTAL COST | OF REHABILITAT | ION AC | TIVITY 3 | | \$1,122,717 | \neg |
| 381 | DELIABILITATIO | ALACTI OTI | VE 4 D 00 | | | | | | | | |
| 383 | REHABILITATIO | NACTIVITY 4 - | YEAR 20 | | | | <u> </u> | | | | |
| 384 | 70800 | LIN, FT. | 100.00% | LONGITUDINAL SHOULDER | R JOINT ROLITING & SEAL | ING | + | \$0.80 | = | \$56,640 | |
| 385 | | | 1 | | | | | 40.00 | | 4.0,010 | - |
| 386 387 | 35400 | LIN. FT. | 100.00% | CENTERLINE JOINT ROUT | & SEAL (SINGLE LANE PA | (VING) | | \$0,95 | z | \$33,630 | |
| 388 | 38940 | LIN, FT. | 50.00% | RANDOM / THERMAL CRA | CK ROLITING AND SEALIN | | - | \$1.00 | = | \$38,940 | |
| 389 | | | | | 130000000 | | ╁~~ | | | \$00,840 i | - |
| 390 | 94 | SQ. YDS. | 0.10% | PARTIAL-DEPTH PAVEMEN | | | | \$41.00 | = | \$3,854 | |
| 391 392 | | | | (Mill & Fill Surface) | 2 inches | OF REHABILITAT | 1011.4 | NT 11 (17 NZ | | Ø400 D0 1 | |
| 393 | | | | | TOTAL COST | OF KEHABILITAT | ION AC | JIIVITY 4 | - | \$133,064 | $\vdash\vdash\vdash$ |
| | REHABILITATIO | N ACTIVITY 5 - | YEAR 25 | | | | 1 | | | | |
| 395 | 70000 | LIN ET | 400.000 | LONGITUONI | | | | | | | |
| 396 397 | 10800 | LIN. FT. | 100.00% | LONGITUDINAL SHOULDE | K JUINT ROUTING & SEAL | _ING | | \$0.80 | = | \$56,640 | |
| 398 | 35400 | LIN. FT. | 100.00% | CENTERLINE JOINT ROUT | & SEAL (SINGLE LANE PA | AVING) | + | \$0.95 | _= | \$33,630 | \vdash |
| 399 | 00010 | 1 | | | | | ~ | | | | |
| 400 | 38940 | LIN. FT. | 50.00% | RANDOM / THERMAL CRA | CK ROUTING AND SEALI | NG | | \$1.00 | = | \$38,940 | |
| 402 | 472 | SQ. YDS. | 0.50% | PARTIAL-DEPTH PAVEME | NT PATCHING | | | \$41.00 | | \$19,352 | <u> </u> |
| 403 | | | 1 | | 2 inches | | | | | 7,10,002 | _ |
| 404 405 | | | | | TOTAL COST | OF REHABILITA | FION A | CTIVITY 5 | | \$148,562 | |
| | REHABILITATIO | N ACTIVITY 6 | VEVD 30 | | **** | | | | | | |
| 407 | TO I TO LETT THE | I I | 1040 30 | | | } | | | | AP154-4 | - |
| 408 | 94400 | SQ. YDS. | | 2-INCH MILLING (note) | | standard | | \$2.00 | = | \$188,800 | \vdash |
| 409 | | | | NOTE: Pavement only - St | andard; Pavement & Should | der - <u>Limiting Strai</u> | n | | | | |
| 411 | 1888 | SQ. YDS. | 2 00% | PARTIAL-DEPTH PAVEME | NT DATCHING | | _ | \$26.00 | == | \$49,088 | |
| 412 | | | 2.003.0 | (Mill & Fill Additional 2.00 is | | | | Ψ20.00 | | Ψ43,000 | |
| 413 414 | E54 | 00 10 | | | | | | | | | |
| 415 | 551 | SQ. YD. | 1,00% | PARTIAL-DEPTH SHOULD Standard Design ==> Mill 8 | | 7 | _ | \$35.00 | L= | \$19,285 | - |
| 416 | | | | Cizzidate Design Willia | 7 III Suriace | | - | | | | ╁── |
| 417 | 19824 | TON | ļ | HMA Overlay - Pavement O | nly | 3.75 | | \$88.50 | = | \$1,754,424 | 1 |
| 418 | 5397 | TON | + | HMA Overlay - Shoulder Or | llv | 」 . 1.75 | Щ | \$82,35 | = | \$444,443 | +- |
| 420 | | <u> </u> | 1 | Overlay - orlouider Of | 13 | ۱./۶ | | 404,35 | + | Ψ ηηη ,443 | ╡─── |
| 421 | | <u></u> | | | TOTAL COS | T OF REHABILITA | TION A | CTIVITY | ; | \$2,456,040 | |
| 422 | | | 1. | | | | | | | | |
| | REHABILITATION | ON ACTIVITY 7 | - YEAR 35 | | | | | | 1 | | |
| 424 | 70800 | LIN. FT. | 100 000 | LONGITUDINAL SHOULDE | P IOINT POLITIMO 2 OF 4 | LING | | \$0.80 | = | \$56,640 | |
| 425 426 427 428 429 430 431 432 | ,,,,,,, | 1 " | , 100,007 | יריייסיייסיייארי פערטרדי | LINDON ROUTING & SEA | LING | | \$0.0U | + | \$50,64 0 | 4— |
| 427 | 35400 | LIN. FT. | 100,00% | CENTERLINE JOINT ROU | T & SEAL (SINGLE LANE F | AVING) | | \$0.95 | = | \$33,630 |) |
| 428 | 38040 | LIN. FT. | E0.000 | RANDOM / THERMAL CR | ACK BOUTING AND SET | l NG | - - | 64.00 | | 400 C 10 | |
| 430 | 30340 | 1-117.71. | 30.00% | TONDOM/ INCKIVIAL CR | NON ROUTING AND SEAL | IIYG | + | \$1.00 | = | \$38,940 | ' |
| 431 | 94 | SQ. YDS. | 0.10% | PARTIAL-DEPTH PAVEME | NT PATCHING | 3.75 | \pm | \$56.00 | = | \$5,264 | <u> </u> |
| 432 | 3 | J | | (Mill & Fill Surface) | | | | | | | |
| 433 | | | | - | TOTAL COS | T OF REHABILITA | TION | ACTIVITY | 7 | \$134,474 | 1 |
| | REHABILITATION | ON ACTIVITY A | - YEAR 4 | | | | + | | + | | |
| 436 | 3 | T | | | | | + | | | | + |
| 43 | 70800 | LIN. FT. | 100,00% | LONGITUDINAL SHOULD | ER JOINT ROUTING & SEA | ALING | | \$0.80 |) = | \$56,640 | 0 |
| 438 | 35400 | LIN, FT. | 100 000 | 6 CENTERLINE JOINT ROU | TR CEAL (CINICLE LANG. | | ++ | \$0.95 | = | #22.00 | - |
| 43: 43: 43: 44: 44: | 25400 | - IMIT + 1 1 + | 100,003 | VIOLITIEREINE JOHN ROU | A SEVE TOURSEE TAKE | - (| + | \$U.9 | - - | \$33,63 | - |
| 44 | 38940 | LIN. FT. | 50.009 | 6 RANDOM / THERMAL CR | ACK ROUTING AND SEAL | ING | | \$1.0 |) = | \$38,94 | 0 |
| 44: | 2 | SQ. YDS. | 0.500 | AIDADTIAL DEDTUBLUES | ENT DATOURNO | | \Box | @F^ ^ | | A | 2 |
| 44 | 4/2 | OW, TUO. | 0.50% | 6 PARTIAL-DEPTH PAVEMI (Mill & Fill Surface) | ENT PATCHING | 3.79 | ~— | \$56.0 | 0 = | \$26,43 | 4 |
| 44 | 5 | | | 1 (Sim C.) III SUITACE) | TOTAL COS | T OF REHABILIT | ATION | ACTIVITY | 8 | \$155,64 | 2 |
| 44 | | | | | | T | $\prod_{i=1}^{n}$ | | 1 | 1 | |

| | | | · | | | | | | | | |
|------------|-----------------------|--------------------|--|--|-----------------------|--------------------------|--|--|--|--|--------|
| | С | D | E | F | G | н | 1 | J | К | L | М |
| | LIMITS OF ANALYS | | | | | | 1 | | 1 | | _ |
| 11 | STATION | 839 + 00 | | | 1016 + 00 | | | OMISSIONS | | ດັ | |
| 12 | NET LENGTH | 17700 | FEET | 3,352 | MILES | | | | | | |
| 13 | | | | | | | | | | | |
| 447 | ANNUAL COS | T DETERMIN | - NOITAN | FLEXIBLE PAVEME | ENT | | П | ĺ | | | |
| 448 | | · | T | *** | | | Н | | | | |
| 449 | PRESENT WOR | TH CALCULAT | IONS | | *** | | Н | | | | |
| 450 | | | <u> </u> | | ~ | | | | | | |
| 451 | | - | 1 | | TOTAL COST OF C | DRIGINAL PAVE | ME | NT CONSTRUC | TION | \$8,732,211 | —-{ |
| 452 | | | | | 10172 0001 01 | JIGGIIAL I ATL | ï | 117 0011011101 | | 40,102,211 | |
| 453 | PRESENT WORTH | REHABILITATION | ACTIVITY 1 | - YEAR 5 | | \$133.064 | X | 0.8626 | = 1 | \$114,781 | |
| 454 | | | | | | ******* | | | | 5,14,01 | |
| 455 | | REHABILITATION | NACTIVITY 2 | - YEAR 10 | | \$148,562 | х | 0.7441 | = | \$110,545 | |
| 456 | | | | | i | | | | | | |
| 457 | | REHABILITATIO | N ACTIVITY 3 | - YEAR 15 | | \$1,122,717 | X | 0.6419 | = | \$720,672 | |
| 458 | | | J | | | | | | | | |
| 459 460 | | REHABILITATIO | N ACTIVITY 4 | - YEAR 20 | · | \$133,064 | X | 0,5537 | = | \$73,678 | |
| 461 | | DELIA DU PERTO | | | | | | | | | |
| 462 | | REHABILITATIO | NACTIVITY | - YEAR 25 | | \$148,562 | X | 0.4776 | _ = _ | \$70,953 | |
| 463 | | REHABILITATIO | NI A CITIN (ITS) C | VEADO | | | <u> </u> | | | | |
| 464 | | THE PROPERTY OF | T | - TEAR 30 | | \$2,456,040 | Х | 0,4120 | = | \$1,011,888 | |
| 465 | | REHABILITATIO | N ACTIVITY | - VEAD 3E | | 0404.474 | 1 | 0.0554 | | 0.7700 | |
| 466 | | TO TO TO TO | I | - TCAR 35 | | \$134,474 | △ | 0.3554 | = | \$47,792 | |
| 467 | | REHABILITATIO | N ACTIVITY 8 | YEAR 40 | | \$155,642 | ₩ | 0.3056 | = | \$47,720 | |
| 468 | | | | - 1 2 4 4 40 | | \$100,042 | 1 | 0.3050 | - 1 | \$47,720 | - |
| 469 | | - | | | | | + | | | | |
| | | | <u> </u> | | | · | | | | | |
| 470 | | | | | TOTAL REHABILITA | TION COST (PRE | ES | ENT WORTH) | = | \$2,198,029 | - 1 |
| 471 | | | | | | | Ţ | | | | |
| 472 | ANNUAL COS | T PER MILE | CALCUL | ATION - FLEXIBLE | PAVEMENT: | · · | T | | | - | \neg |
| 473 | | i | T | | 1 | | + | | 1 | | 1 |
| 474 | ANNUAL COST P | ER MILE CALCU | ILATION - F | EYIRI E DAVEMENT | | | ╁ | | - | | |
| 475 | Annual Cost per Mile | ==> A = D + M + | CREn x I C + | R1(PWFn1) + R2(PWFn2) | + + Pa(D\A/Eap\1 | | ╁ | | _ | | |
| 476 | | D = Admin & Ove | chead per mili | e; M = total annual main | tenance cost per mile | | | | - | | |
| 477 | | | | Construction Cost per mile = | \$2,604,863 | | + | 1 | | | |
| 478 | | | | | \$2,004,000 | According to Built | بـــــــــــــــــــــــــــــــــــــ | · · · · · · · · · · · · · · · · · · · | | | - |
| 479 | | | " | CRF(n) => n= number of ye | | Annually per Mi | 4 | <u> </u> | | | |
| 480 | | CRF(45) = (0.03/ | 1+0.03\^45\ / | (1+0.03)^45 - 1] = | 0.040785176 | | ╁ | | +- | | |
| 481 | | (| 1 | ((1.0.00) 10 - 1] - | 0.040785178 | ļ | ╁ | 1 | _ | - | |
| 482 | Rehabilitation cost p | er mile and canita | Recovery for | l. | | | - | | | | |
| 483 | R1(PWF5) = | \$114,781 | | JUI | | | Ļ | 1 | 1 | | |
| 484 | R1(PWF10) = | | | | A= = | # \$ ##133;487:00 | ⊮a. | nnual cost per r | nilė | | |
| 485 | R2(PWF15) = | | | | | 1 | 1 | ļ | | <u> </u> | |
| 486 | R3(PWF20) = | \$720,672 | | | | | 4 | | - | | |
| 487 | R4(PWF25) = | \$70,953 | 1 - 1 - 1 | ļ | | | _ļ_ | <u> </u> | | | |
| 488 | R5(PWF30) = | | | | | 1 | _ | <u> </u> | 1 | Į | |
| 489 | | | | | ANNUAL COST PER I | MILE (FLEXIBLE | PΑ | VEMENT | == | \$133,487 | |
| | R6(PWF35) = | | | | | | • | | <u> </u> | | |
| 490 | R7(PWF40) = | | _ · · | <u></u> | | | 1 | | 1 | | |
| 491 | TOTAL = | \$2,198,029 | \$655,683 | . | 1 | | | | | | |
| 492 | | | | <u> </u> | | J | I | | | | |
| 493 | End of - FULL-D | FRIH HMA PA | VEMENT 8 | HMA OVERLAY OF F | RUBBLIZED PCC PAVE | MENT | | | | | |
| 494 | l <u>.</u> | <u> </u> | ı | | | 1 | T | 1 | | | |
| - | | | | | | | | | | | |

| | c | D | E | F | G | н | П | | К | | М |
|--|---|--|---|--|--|--|----------|--|--|---|----------|
| | LIMITS OF ANALYS | IS | | | | | ᅥ | | | | |
| 11 | STATION | 839 + 00 | | | 1016+00 | | | OMISSIONS | | ຼິ ດິ | |
| 12 13 | NET LENGTH | 17700 | FEET | 3.352 | MILES | | \Box | | | | |
| -13 | 100 CO | NTINILIOUG | | | | | Ц | | September 1 | 0.0155913544356343.550-1 | - |
| | | | | FORCED CONC | | | ΝI | ひとり 海の野 | | | |
| 495 | | CONTI | NUOUS | LY REINFORCED | CONCRETE PA | VEMENT | | | | | |
| 496 | | | | | See that the second | 120.00.40.00.00.00.00.00 | ٦ | *************************************** | 1 | | |
| | DATE: | 03/26/12 | | TRAFFIC LANES | ROUTE: | | | FAP 734 ((IL 2 | | | |
| | | Sam Abdullah | CHKD BY: | | SECTION: | | | 77-2-1&77-28- | 2 | | |
| | SPECIFICATIONS | | CHKD BY: | | COUNTY: | | Н | COUNTY | ├ | | |
| 501 | NET LENGT | Ή . | 17700 | FEET | 3,352 | MILES | Н | | | <u> </u> | |
| 502 | | | | | | *************************************** | | | | | |
| 503 504 | NUMBER OF TRAF | FIC LANES | 4 RURAL | | LANE WIDTH (AVE) = | 12 | F | | <u> </u> | | |
| | GUTTER FLAG WID |)TH (FT) = | I O | DAVE | <u> </u> D SHLD WIDTH (TOTAL) = | 28 | | <u>; </u> | | | |
| 506 | | | 1 | | 1 | i e | ✝ | | | | \vdash |
| 507 | ITEMIZED CO | NSTRUCTIO | N COST | - CONTINUOUSLY | REINFORCED CON | CRETE PAV | /F | MENT | 1 | | |
| 508 | | | | | | | T | | - - | - | \vdash |
| 509 | QUANTITY | UNIT | | ITEM | | | | UNIT COST | .L | COST | 1.15 |
| 510 511 | 94400 | SQ. YD. | 10 | INCH Continuously Reinford | ced Concrete Pavement | <u> </u> | <u>_</u> | \$42.00 | <u> </u> | \$3,964,800 | |
| 512 | 106200 | SQ, YD, | 4 Inch Stahl | lized Sub-Base | | | \vdash | \$11.10 | <u></u> | \$1,178,820 | \$ 12 |
| 513 | , | | , Otdo | | | | + | MARKET STATE | Ţ <u></u> | 41,170,020 | 1 |
| 514 | 95,383.33 | SQ. YD. | 12 Inch Imp | roved Sub-Grade (CA) | | ! | L | \$12.30 | \ <u> </u> | \$1,173,211 | F |
| 515 516 | 55067 | SQ. YD. | 45 | INCH BOO GUOLU DES | | | Ļ | STREET SERVICES | | 60.040.044 | R |
| 517 | 33087 | Ju. 12. | 10 | INCH PCC SHOULDER | | + | + | \$42.00 | * = | \$2,312,814 | s |
| 518 | Ö | SQ. YD. | 0.0 | inch - HMA Surface Remov | al | | 1 | \$1.50 | } == | \$0 | j. j. j |
| 519 | | TON | | | |] | L | | | | |
| 520 521 | 00 | ION | U.Q | inch - HMA BINDER, | PG6 | 62-28, IL19.0, N70 1 | · | \$45.00 | = | \$0 | - |
| | 97 | TON | • | HMA LEVEL BINDER | | J PG ???? | _ | \$45.00 | <u> </u> | \$0 | ြု |
| 523 | |] | 1 | | | | Γ | | | | |
| 524 525 | GF GF | CU. YD. | 1 | FURNISHED EXCAVATION | <u> </u> | ļ | 4 | \$15.00 | <u>}</u> = | - \$0 | S |
| | 0 | CU. YD. | 1 | Earth Excavation | L | | ╁ | \$11.50 | il = | \$0 | |
| 527 | | | <u> </u> | MATERIAL ENGAGE | | | 1 | 133.53.65 | | | |
| 528 | | | | TOTAL | COST OF ORIGINAL JOINT | ED DAVEMENT | | NSTRUCTION | ļ | 60 CÓO 045 | 7 |
| 529 | | | | | | ED PAVEMENT (| CO | |) = | 35.529.545 | 1 16 300 |
| | | | | | TOST OF CRIGINAL TOILS | EDPAVEMENT | CO | T T T T T T T T T T T T T T T T T T T | | \$8,629,645 | 2,864% |
| | | STS OF FUI | TURE MA | | T | EDPAVEMENT | | - I | <u> </u> | \$5,529,545 | 1 g Mary |
| | | OSTS OF FUT | TURE MA | INT. AND REHABIL | T | ED PAVEMENT | | I I | | \$5,629,645 | 1 支通数 |
| 530 531 532 | PRESENT CO | UNIT | | INT. AND REHABIL | ITATION WORK | ED PAVEMENT | | | | UNIT COST | Region . |
| 530 531 532 533 | PRESENT CO | | | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC | ITATION WORK HING, Class A | ED PAVEMENT | | | = | | Region . |
| 530 531 532 533 534 | PRESENT CO | UNIT | | INT. AND REHABIL | ITATION WORK HING, Class A | ED PAVEMENT | | | | UNIT COST | Region . |
| 530 531 532 533 534 535 | PRESENT CO | UNIT | FULL-DEP | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC | ITATION WORK | | | | | UNIT COST | |
| 530 531 532 533 534 535 536 537 | PRESENT CO | UNIT SQ. YD. | FULL-DEP | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC Activity 1, 2, 3, 4, 5, and 7. WA OVERLAY of PAVEMEN Activity 5 | ITATION WORK HING, Class A T (See BDE Chapter 53-4.0 | | | 4100 | | UNIT COST \$135.00 | |
| 530 531 532 533 534 535 536 537 538 | PRESENT CO 94400 | UNIT SQ. YD. | FULL-DEP | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC ACTIVITY 1, 2, 3, 4, 5, and 7. WA OVERLAY OF PAVEMEN | ITATION WORK HING, Class A T (See BDE Chapter 53-4.0 | | | INCHES ' | | UNIT COST \$135.00 | |
| 530 531 532 533 534 535 536 537 | PRESENT CO | UNIT SQ. YD. | FULL-DEP | INT. AND REHABIL ITEM ITH PCC PAVEMENT PATC Activity 1, 2, 3, 4, 5, and 7. WA OVERLAY OF PAVEMEN Activity 5 Poly, HMA SC, MIX D, N7 | ITATION WORK HING, Class A T (See BDE Chapter 53-4.0- | 4 for thickness) | | 4100 | | UNIT COST \$135.00 \$135.00 | i i |
| 530 531 532 533 534 535 536 537 538 540 541 | 94400 0 | UNIT SQ. YD. | FULL-DEP | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC Activity 1, 2, 3, 4, 5, and 7. WA OVERLAY of PAVEMEN Activity 5 | ITATION WORK HING, Class A T (See BDE Chapter 53-4.0- | 4 for thickness) | | 4100 | | UNIT COST \$135.00 | i i |
| 530 531 532 533 534 535 536 537 538 540 541 | 94400 0 | UNIT SQ. YD. | FULL-DEP | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC Activity 1, 2, 3, 4, 5, and 7. MA OVERLAY OF PAVEMEN JACTIVITY 5 POLY, HMA SC, MIX D, N7 MA OVERLAY OF SHOULDE | ITATION WORK HING, Class A T (See BDE Chapter 53-4.0-0 R (See BDE Chapter 53-4.0-0 | 4 for thickness) | | 4100 | | UNIT COST \$135.00 \$135.00 | i i |
| 530 531 532 533 534 535 536 537 538 539 540 541 | 94400 0 0 | UNIT SQ. YD. TON | POLICY H | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC Activity 1, 2, 3, 4, 5, and 7. MA OVERLAY OF PAVEMEN Poly, HMA SC, MIX D, N7 MA OVERLAY OF SHOULDE Activity 5 HMA SC, MIX C, NS | ITATION WORK HING, Class A T (See BDE Chapter 53-4.0-0 R (See BDE Chapter 53-4.0-0 R (See BDE Chapter 53-4.0-0 | 4 for thickness) | | INCHES | | UNIT COST \$135.00 \$82.00 | |
| 530 531 532 533 534 535 536 537 540 541 542 543 | 94400 0 70800 | UNIT SQ. YD. | POLICY H | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC Activity 1, 2, 3, 4, 5, and 7. MA OVERLAY OF PAVEMEN Activity 5 Poly, HMA SC, MIX D, N7 MA OVERLAY OF SHOULDE Activity 5 HMA SC, MIX C, N5 CRACK ROUTING & SEALI | ITATION WORK HING, Class A T (See BDE Chapter 53-4.0-0 R (See BDE Chapter 53-4.0-0 R (See BDE Chapter 53-4.0-0 | 4 for thickness) | | INCHES ' | | UNIT COST \$135.00 \$135.00 | |
| 530 531 532 533 534 535 536 537 538 540 541 542 543 | 94400 0 70800 | UNIT SQ. YD. TON | POLICY H | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC Activity 1, 2, 3, 4, 5, and 7. MA OVERLAY OF PAVEMEN Activity 5 Poly, HMA SC, MIX D, N7 MA OVERLAY OF SHOULDE Activity 5 HMA SC, MIX C, N5 CRACK ROUTING & SEALI | ITATION WORK ITATION WORK ING, Class A T (See BDE Chapter 53-4.0-0 R (See BDE Chapter 53-4.0-0 NG | 4 for thickness) | | INCHES ' | | UNIT COST \$135.00 \$82.00 | |
| 530 531 532 533 534 535 536 537 538 540 541 542 543 | 94400 0 70800 | TON TON LIN. FT. | POLICY HI POLICY HI RANDOM | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC: Activity 1, 2, 3, 4, 5, and 7. MA OVERLAY OF PAVEMEN Activity 5 Poly, HMA SC, MIX D, N7 MA OVERLAY OF SHOULDE Activity 5 HMA SC, MIX C, N5 CRACK ROUTING & SEALI Note: For random-crack relativity 6 and 7 | ITATION WORK HING, Class A T (See BDE Chapter 53-4.0- R (See BDE Chapter 53-4.0- NG Outling and sealing, assume 1 | 4 for thickness) | | INCHES ' | | UNIT COST \$135.00 \$82.00 | |
| 530 531 532 533 534 535 536 537 538 540 541 542 543 | 94400 0 70800 | UNIT SQ. YD. TON | POLICY HI POLICY HI RANDOM | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC: Activity 1, 2, 3, 4, 5, and 7. MA OVERLAY OF PAVEMEN Poly, HMA SC, MIX D, N7 MA OVERLAY OF SHOULDE Activity 5 HMA SC, MIX C, N5 CRACK ROUTING & SEALI Note: For random-crack re Activity 6 and 7 DEPTH PAVEMENT PATCH | ITATION WORK HING, Class A T (See BDE Chapter 53-4.0- R (See BDE Chapter 53-4.0- NG Outling and sealing, assume 1 | 4 for thickness) 4 for thickness) 00 ft/station per le | ane | INCHES ' | | UNIT COST \$135.00 \$82.00 | |
| 530 531 532 533 534 535 536 537 540 541 542 543 | 94400 0 70800 | TON TON LIN. FT. | POLICY HI POLICY HI RANDOM | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC: Activity 1, 2, 3, 4, 5, and 7. MA OVERLAY OF PAVEMEN Activity 5 Poly, HMA SC, MIX D, N7 MA OVERLAY OF SHOULDE Activity 5 HMA SC, MIX C, N5 CRACK ROUTING & SEALI Note: For random-crack relativity 6 and 7 | ITATION WORK HING, Class A T (See BDE Chapter 53-4.0 R (See BDE Chapter 53-4.0 NG Sutting and sealing, assume of the sealing and sealing. | 4 for thickness) | ane | INCHES ' | | UNIT COST \$135.00 \$82.00 | |
| 530 531 532 533 534 535 536 537 540 541 542 543 | 94400 0 70800 | TON TON LIN. FT, SQ. YD. | POLICY HI RANDOM PARTIAL- | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC: Activity 1, 2, 3, 4, 5, and 7. MA OVERLAY OF PAVEMEN Activity 5 Poly, HMA SC, MIX D, N7 MA OVERLAY OF SHOULDE Activity 5 HMA SC, MIX C, N5 CRACK ROUTING & SEALI Note: For random-crack re Activity 6 and 7 DEPTH PAVEMENT PATCH Activity 6 and 7 (Mill & Fill Surface, See | ITATION WORK ITATION WORK HING, Class A T (See BDE Chapter 53-4.0- 0 R (See BDE Chapter 53-4.0- 0 ING Outling and sealing, assume of the sealing and sealing assume of the sealin | 4 for thickness) 4 for thickness) 00 ft/station per le | ane | INCHES ' | | UNIT COST \$135.00 \$82.00 \$116.00 \$1.20 | 55 |
| 530 531 532 533 534 535 536 537 540 541 542 543 | 94400 0 70800 | TON TON LIN. FT. | POLICY HI RANDOM PARTIAL- | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC: Activity 1, 2, 3, 4, 5, and 7. MA OVERLAY OF PAVEMEN Poly, HMA SC, MIX D, N7 MA OVERLAY OF SHOULDE Activity 5 HMA SC, MIX C, N5 CRACK ROUTING & SEALI Note: For random-crack re Activity 6 and 7 DEPTH PAVEMENT PATCH Activity 6 and 7 (Mill & Fill Surface, See Jonal Shoulder, Joint F | ITATION WORK ITATION WORK HING, Class A T (See BDE Chapter 53-4.0- 0 R (See BDE Chapter 53-4.0- 0 ING Outling and sealing, assume of the sealing and sealing assume of the sealin | 4 for thickness) 4 for thickness) 00 ft/station per le | ane | INCHES ' | | UNIT COST \$135.00 \$82.00 | 55 |
| 530 531 532 533 534 535 536 537 540 541 542 543 | 94400 0 70800 | TON TON LIN. FT, SQ. YD. | POLICY HI RANDOM PARTIAL- | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC: Activity 1, 2, 3, 4, 5, and 7. MA OVERLAY OF PAVEMEN Activity 5 Poly, HMA SC, MIX D, N7 MA OVERLAY OF SHOULDE Activity 5 HMA SC, MIX C, N5 CRACK ROUTING & SEALI Note: For random-crack re Activity 6 and 7 DEPTH PAVEMENT PATCH Activity 6 and 7 (Mill & Fill Surface, See | ITATION WORK ITATION WORK HING, Class A T (See BDE Chapter 53-4.0- 0 R (See BDE Chapter 53-4.0- 0 ING Outling and sealing, assume of the sealing and sealing assume of the sealin | 4 for thickness) 4 for thickness) 00 ft/station per le | ane | INCHES ' | | UNIT COST \$135.00 \$82.00 \$116.00 \$1.20 | 55 |
| 530 531 532 533 534 535 536 537 538 540 541 542 543 | 94400 0 70800 | TON TON LIN. FT, SQ. YD. | POLICY HI POLICY HI RANDOM PARTIAL-I | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC: Activity 1, 2, 3, 4, 5, and 7. MA OVERLAY OF PAVEMEN Activity 5 Poly, HMA SC, MIX D, N7 MA OVERLAY OF SHOULDE Activity 5 HMA SC, MIX C, N5 CRACK ROUTING & SEALI Note: For random-crack re Activity 6 and 7 [Mill & Fill Surface, See] DINAL SHOULDER JOINT F Activity 3, 6 and 7 | ITATION WORK ITATION WORK HING, Class A T (See BDE Chapter 53-4.0 O R (See BDE Chapter 53-4.0 ING Souting and sealing, assume of the sealing and sealing assume of the sealing assume of the sealing and sealing assume of the sealing assume of t | 4 for thickness) 4 for thickness) 00 ft/station per le | ane | INCHES ' | | UNIT COST \$135.00 \$82.00 \$116.00 \$1.20 | 000 |
| 530 531 532 533 534 535 536 537 538 540 541 542 543 | 94400 0 70800 | TON TON LIN. FT. SQ. YD. | POLICY HI POLICY HI RANDOM PARTIAL-I | INT. AND REHABIL ITEM TH PCC PAVEMENT PATCH Activity 1, 2, 3, 4, 5, and 7, WA OVERLAY OF PAVEMEN Activity 5 Poly, HMA SC, MIX D, N7 MA OVERLAY OF SHOULDE Activity 5 HMA SC, MIX C, N5 CRACK ROUTING & SEALI Note: For random crack in Activity 6 and 7 (Mill & Fill Surface, See J DINAL SHOULDER JOINT F Activity 3, 6 and 7 | ITATION WORK ITATION WORK HING, Class A T (See BDE Chapter 53-4.0 O R (See BDE Chapter 53-4.0 ING Souting and sealing, assume of the sealing and sealing assume of the sealing assume of the sealing and sealing assume of the sealing assume of t | 4 for thickness) 4 for thickness) 00 ft/station per le | ane | INCHES ' | | \$125 \$1.00 | 000 |
| 530 531 532 533 534 535 536 537 538 541 542 543 544 545 555 555 555 555 555 555 555 | 94400 0 70800 94400 70800 70800 35400 | TON TON LIN. FT. LIN. FT. | POLICY HI POLICY HI RANDOM PARTIAL-I LONGITUI CENTERL | INT. AND REHABIL ITEM ITEM TH PCC PAVEMENT PATC: Activity 1, 2, 3, 4, 5, and 7. MA OVERLAY of PAVEMEN Activity 5 Poly, HMA SC, MIX D, N7 MA OVERLAY of SHOULDE Activity 5 HMA SC, MIX C, N5 CRACK ROUTING & SEALI Note: For random-crack re Activity 6 and 7 (Milli & Fill Surface, See Joinal SHOULDER JOINT F Activity 3, 6 and 7 INE JOINT ROUTING AND Activity 3, 6 and 7 | ITATION WORK ITATION WORK HING, Class A T (See BDE Chapter 53-4.0 O R (See BDE Chapter 53-4.0 ING Outling and sealing, assume of the country of thickness above) ROUTING AND SEALING SEALING | 4 for thickness) 4 for thickness) 00 ft/station per le | ane | INCHES ' | | UNIT COST \$135.00 \$135.00 \$115.00 \$1.20 \$1.20 \$1.00 | 55 |
| 530 531 532 533 534 535 536 537 538 540 541 542 543 | 94400 0 70800 94400 70800 355067 | TON TON LIN. FT. SQ. YD. | POLICY HI POLICY HI RANDOM PARTIAL-I LONGITUI CENTERL | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC: Activity 1, 2, 3, 4, 5, and 7. MA OVERLAY OF PAVEMEN Activity 5 Poly, HMA SC, MIX D, N7 MA OVERLAY OF SHOULDE Activity 5 HMA SC, MIX C, N5 CRACK ROUTING & SEALI Note: For random-crack re Activity 6 and 7 [Mill & Fill Surface, See] DINAL SHOULDER JOINT F Activity 3, 6 and 7 | ITATION WORK ITATION WORK HING, Class A T (See BDE Chapter 53-4.0 O R (See BDE Chapter 53-4.0 ING Outling and sealing, assume of the country of thickness above) ROUTING AND SEALING SEALING | 4 for thickness) 4 for thickness) 00 ft/station per le | ane | INCHES ' | | \$125 \$1.00 | 55 |
| 530 531 532 533 534 535 536 537 538 540 541 543 544 545 545 555 555 555 555 555 555 | 94400 0 70800 94400 70800 70800 35400 55067 | TON TON LIN. FT. LIN. FT. LIN. FT. | POLICY HI RANDOM PARTIAL-I LONGITUI CENTERL | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC Activity 1, 2, 3, 4, 5, and 7. MA OVERLAY OF PAVEMEN Activity 5 Poly, HMA SC, MIX D, N7 MA OVERLAY OF SHOULDE Activity 5 HMA SC, MIX C, N5 CRACK ROUTING & SEALI Note: For random-crack re Activity 6 and 7 (Mill & Fill Surface, See Activity 6 and 7 INE JOINT ROUTING AND Activity 3, 6 and 7 INE JOINT ROUTING AND Activity 3, 6 and 7 PTH PCC SHOULDER PA Activity 4 and 5 | ITATION WORK ITATION WORK HING, Class A T (See BDE Chapter 53-4.0 O R (See BDE Chapter 53-4.0 ING Outling and sealing, assume of the country of thickness above) ROUTING AND SEALING SEALING | 4 for thickness) 4 for thickness) 00 ft/station per le | ane | INCHES ' | | UNIT COST \$135.00 \$135.00 \$115.00 \$1.20 \$1.20 \$1.00 | 55 |
| 530 531 532 533 534 535 536 537 538 540 541 543 544 545 545 555 555 555 555 555 555 | 94400 0 70800 94400 70800 70800 35400 | TON TON LIN. FT. LIN. FT. LIN. FT. | POLICY HI RANDOM PARTIAL-I LONGITUI CENTERL | INT. AND REHABIL ITEM TH PCC PAVEMENT PATC Activity 1, 2, 3, 4, 5, and 7. MA OVERLAY OF PAVEMEN Activity 5 Poly, HMA SC, MIX D, N7 MA OVERLAY OF SHOULDE Activity 5 HMA SC, MIX C, N5 CRACK ROUTING & SEALI Note: For random-crack re Activity 6 and 7 (Mill & Fill Surface, See Activity 6 and 7 INE JOINT ROUTING AND Activity 3, 6 and 7 INE JOINT ROUTING AND Activity 3, 6 and 7 PTH PCC SHOULDER PA Activity 4 and 5 | ITATION WORK ITATION WORK HING, Class A T (See BDE Chapter 53-4.0 O R (See BDE Chapter 53-4.0 ING Outling and sealing, assume of the country of thickness above) ROUTING AND SEALING SEALING | 4 for thickness) 4 for thickness) 00 ft/station per le | ane | INCHES ' | | UNIT COST \$135.00 \$135.00 \$115.00 \$1.20 \$1.20 \$1.00 | 55 |
| 530 531 532 533 534 535 536 537 538 540 541 542 544 543 544 545 556 555 555 555 555 555 556 556 | 94400 0 70800 94400 70800 70800 3 35400 55067 | TON TON LIN. FT. LIN. FT. LIN. FT. REHABILITA | POLICY HI POLICY HI RANDOM PARTIAL-I LONGITUI CENTERL | INT. AND REHABIL ITEM TH PCC PAVEMENT PATCH Activity 1, 2, 3, 4, 5, and 7, 10 and 7 INGLE JOINT ROUTING AND Activity 6 and 7 INGLE JOINT ROUTING AND Activity 3, 6 and 7 PTH PCC SHOULDER PARACTIVITY COST | ITATION WORK ITATION WORK HING, Class A T (See BDE Chapter 53-4.0 0 R (See BDE Chapter 53-4.0 ING Sutting and sealing, assume of the continuous sealing, assume of the co | 4 for thickness) 4 for thickness) 00 ft/station per le | ane | INCHES ' | | UNIT COST \$135.00 \$135.00 \$115.00 \$1.20 \$1.20 \$1.00 | 55 |
| 530 531 532 533 534 535 536 537 540 541 543 544 543 544 545 555 555 555 | 94400 0 70800 94400 70800 70800 35400 355067 | TON TON TON LIN. FT. LIN. FT. LIN. FT. LIN. FT. LIN. FT. UNBONDE | POLICY HI POLICY HI RANDOM PARTIAL-I LONGITUI CENTERL FULL-DEF | INT. AND REHABIL ITEM TH PCC PAVEMENT PATCH Activity 1, 2, 3, 4, 5, and 7, and | ITATION WORK ITATION WORK HING, Class A T (See BDE Chapter 53-4.0 0 R (See BDE Chapter 53-4.0 ING Sutting and sealing, assume of the continuous sealing, assume of the co | 4 for thickness) 4 for thickness) 00 ft/station per le | ane | INCHES ' | | UNIT COST \$135.00 \$135.00 \$115.00 \$1.20 \$1.20 \$1.00 | 55 |
| 530 531 532 533 534 535 536 547 548 548 548 548 549 548 548 548 548 548 548 548 548 | 94400 0 70800 94400 70800 70800 35400 MAINT. AND REHABILITATIO | TON TON TON LIN. FT. LIN. FT. LIN. FT. LIN. FT. LIN. FT. UNBONDE | POLICY HI POLICY HI RANDOM PARTIAL-I LONGITUI CENTERL FULL-DEF | INT. AND REHABIL ITEM TH PCC PAVEMENT PATCH Activity 1, 2, 3, 4, 5, and 7, and | ITATION WORK ITATION WORK HING, Class A T (See BDE Chapter 53-4.0 0 R (See BDE Chapter 53-4.0 ING Sutting and sealing, assume of the continuous sealing, assume of the co | 4 for thickness) 4 for thickness) 00 ft/station per le | ane | INCHES ' | | UNIT COST \$135.00 \$135.00 \$115.00 \$1.20 \$1.20 \$1.00 | 55 |
| 530 531 532 533 534 535 536 537 540 541 542 543 543 544 545 545 555 555 555 555 555 | 94400 0 70800 70800 94400 70800 70800 94400 MAINT. AND REHABILITATIO | TON TON TON LIN. FT. LIN. FT. LIN. FT. LIN. FT. LIN. FT. UNBONDE | POLICY HI POLICY HI RANDOM PARTIAL- LONGITUI CENTERL FULL-DEF | INT. AND REHABIL ITEM TH PCC PAVEMENT PATCH Activity 1, 2, 3, 4, 5, and 7, and | ITATION WORK ITATION WORK HING, Class A T (See BDE Chapter 53-4.0-0 0 R (See BDE Chapter 53-4.0-0 0 ITATION WORK ITATION WOR | 4 for thickness) 4 for thickness) 00 ft/station per la | ane | INCHES ' | | UNIT COST \$135.00 \$135.00 \$115.00 \$1.20 \$1.20 \$1.00 | 51 |

| <u> </u> | | | | | | | | | | | |
|------------|---|------------------|-------------------|--|---------------------------------------|------------------------------|-----------|---------------|----------------|---------------------|--|
| 10 | C LIMITS OF ANALYS | D IS | E | F | G | н | <u></u> | J | <u> </u> | | M. |
| 11 | STATION | 839 + 00 | TO STA | TION | ا 1016 + 00 | | + | OMISSIONS | | ەك م | - |
| 12 | NET LENGTH | 17700 | FEET | 3.352 | MILES | | 1 | | | | |
| 13 | REHABILITATIO | N ACTIVITY 2 | VEAD 45 | | | | Ţ | | | | |
| 568 | VELIADICI I VIIO | NACTIVILIZ- | TEAR 15 | | ر | | + | | | | |
| 569 | 189 | SQ. YD. | 0.20% | FULL-DEPTH PCC PAVEM | ENT PATCHING, Class A | - | ╁ | \$135,00 | = | \$25,515 | \dashv |
| 570 | | | | | TOTAL COST | OF REHABILITAT | ΙΟΙ | NACTIVITY 2 | | \$25,515 | |
| 571 572 | REHABILITATIO | N ACTIVITY 2 | VEAD 20 | | · · · · · · · · · · · · · · · · · · · | - | + | | | | |
| 573 | KEHADIEHAHO | MACHINIT 3- | TEAR ZU | | <u> </u> | | + | | - | | |
| 574 | 472 | SQ. YD. | 0.50% | FULL-DEPTH PCC PAVEN | ENT PATCHING, Class A | | \dagger | \$135,00 | = | \$63,720 | |
| 575 576 | 70000 | LIN. FT. | 400.000 | LONGITUDINAL CUR. | | | Į. | | | | |
| 577 | 70000 | LIN. FI. | 100,00% | LONGITUDINAL SHOULDE | R JOINT ROUTING & SEAL | ING | + | \$0,80 | = | \$56,640 | |
| 578 | 35400 | LIN. FT. | 100,00% | CENTERLINE JOINT ROU | TING & SEALING | | + | \$0.95 | = _ | \$33,630 | |
| 579 580 | · | | | | TOTAL COST | OF REHABILITA | ΠŌ | N ACTIVITY 3 | | \$153,990 | |
| | REHABILITATIO | N ACTIVITY 4 - | YEAR 25 | | · · · · · · · · · · · · · · · · · · · | ! | ┥ | + | _ | | |
| 582 | <u>, , , , , , , , , , , , , , , , , , , </u> | | i · | | <u> </u> | | + | | —├- | | \dashv |
| 583 | 708 | SQ. YD. | 0.75% | FULL-DEPTH PCC PAVEN | MENT PATCHING, Class A | | コ | \$135.00 | = | \$95,580 | |
| 584 585 | 275 | SQ. YD. | 0.50% | FULL DEPTH PCC SHO | ULDER PATCHING, Class C | | 4 | \$125.00 | - - | \$34,375 | <u>-</u> |
| 586 | | | 0.0070 | . 002 02 111 1 00 010 | | OF REHABILITA | п | | <u>-</u> - | \$129,955 | \dashv |
| 587 | | | | | | | | | | | |
| 588 589 | REHABILITATIO | N ACTIVITY 5 - | YEAR 30 | · | , | | Ц | | | · | |
| 590 | 2832 | SQ. YD. | 3.00% | FULL-DEPTH PCC PAVEN | MENT PATCHING Class A | | - | \$135.00 | = | \$382,320 | |
| 591 | | | | | | | | \$100.00 | | | |
| 592 593 | 551 | SQ. YD. | 1.00% | FULL-DEPTH PCC SHO | ULDER PATCHING, Class (| 2 | Ц | \$125.00 | = | \$68,875 | |
| 594 | 0 | TON | 100.00% | POLICY HMA OVERLAY | TE DAVEMENT | j | Ч | \$88.40 | = | so | |
| 595 | | 1.011 | 100.0070 | (See 53-4.04 for required to | | 1 | П | \$65.40 | - | | |
| 596 597 | | ITON | 400.000 | 00110111111 | | | | | | | |
| 598 | | ION | 100.00% | POLICY HMA OVERLAY ((See 53-4.04 for required to | | 7 | 러 | \$81.90 | = | \$0 | |
| 599 | | | | (lose oo-4.04 tol tequiled t | | OF REHABILITA | TIC | N ACTIVITY 5 | | \$451,195 | \dashv |
| 600 | | | | | | | | | | | |
| 601 602 | REHABILITATIO | N ACTIVITY 6 | YEAR 35 | <u> </u> | | | Ц | | | | |
| 603 | 70800 | LIN. FT. | 100.00% | I ONGITI IDINAL SHOULD | I ER JOINT ROUTING & SEA | LING | H | \$0.80 | -=- | \$56,640 | |
| 604 | | <u>"</u> | | | | LING | \vdash | 40.00 | | \$20,040 | |
| 605 | 35400 | LIN. FT. | 100.00% | CENTERLINE JOINT ROL | JT & SEAL | | | \$0.95 | = | \$33,630 | |
| 606 | 35400 | LIN. FT. | 50.00% | Randon Crack Routing & S | Capling (See Mote Ahoue) | | ╀ | \$1.25 | = | \$44,250 | |
| 608 | | <u> </u> | 00.007 | Transcor Orack (Colletty & C | sealing (See Note Above) | 1 | 十 | 91.25 | | \$71,200 | H |
| 609 | 94 | SQ. YD. | 0.10% | PARTIAL-DEPTH PAVEM | | <u>-</u> - | _ | \$42.00 | = | \$3,948 | |
| 610 611 | | | | (Mill & Fill Surface, See A | Activity 5 thickness above) | i T of Rehabilit <i>i</i> | 1 | N ACTIVITY 6 | | \$138,468 | |
| 612 | | | <u> </u> | | TOTALOGG | 1 OF RETABLETY | Ϊ' | | | φιου,430 | |
| | REHABILITATIO | ON ACTIVITY 7 | - YEAR 40 | | | | | | | | |
| 614 | 470 | SQ. YD. | 0.500 | ELLI DEDTUDO DAVE | MENT DATOURS OF A | | _ | 6405.00 | | #00 700 | |
| 616 | | | 0.50% | OF OLL-DEP IN PCC PAVE | MENT PATCHING, Class A | | + | \$135.00 | = | \$63,720 | |
| 617 | 70800 | LIN. FT. | 100.00% | LONGITUDINAL SHOULD | ER JOINT ROUTING & SEA | ALING | 1 | \$0.80 | <u> </u> | \$56,640 | |
| 618 619 | | LIN. FT. | 100.000 | 6 CENTERLINE JOINT RO | IT P CEAL | | + | enos | | 622 600 | |
| 620 | | polite t' Li | 100.009 | OF OF THE POINT ROLL OF THE PROPERTY OF THE PR | DI & SEAL | 1 | + | \$0.95 | +- | \$33,630 | \vdash |
| 621 | 35400 | LIN. FT. | 50% | 6 Randon Crack Routing & | Sealing (See Note) | | 1 | \$1.25 | = | \$44,250 | |
| 622 623 | 472 | SQ. YD. | 0.509 | 6 PARTIAL-DEPTH PAVEN | MENT DATCHING | IJ. <u>——</u> | Ĺ | \$42,00 | = | \$19,824 | |
| 624 | | Jul. 15. | 0.30% | | Activity 5 thickness above) | 7 | Г | ⊅4∠.00 | + | Φ19,024 | + |
| 625 | | | <u> </u> | 1 | | T OF REHABILIT | ATI | ON ACTIVITY | ' | \$218,064 | |
| | ANNUAL COST | DETERMINAT | ION | | | | \int | | | | |
| 627 | | | | January Company of the Community | , | | Ţ | | | | |
| 629 | PRESENT WO | KIH CALCULA | IIONS | | | <u> </u> | 4- | | | | |
| 630 | 1 | | | TOTAL | OST OF ORIGINAL P | AVENENT CO | NC | TRUCTION | = | \$8,629,645 | 1 |
| 63 | | | | TOTAL | SOUT OF STREET | ATEMENT OO | T | 7110011011 | + | 40,020,040 | - |
| 632 | PRESENT WORT | H: REHABILITATIO | N ACTIVITY | 1 - YEAR 10 | | \$12,69 |) | X 0.7441 | | \$9,443 | |
| 63 | | DEMARK ITATIO | NI ACTOR | /2. VEAD <5 | | par pa | Į, | V 0.0446 | + = | 640.070 | |
| 63: | 5 | REHABILITATIO | NA WO HALL | CF MAIL + 4 I | + | \$25,51 | 2 2 | X 0.6419 | = | \$16,378 | 1 |
| 63 63 | 6 | REHABILITATIO | ON ACTIVITY | / 3 - YEAR 20 | | \$153,99 | <u>o</u> | X 0,5537 | - | \$85,264 | |
| 63 63 | 71 | REHABILITATION | 161 A 0 T 11 11 T | // VEAD OF | | A400.0- | Ţ | | + = | | , |
| 63 | á | REMABILITATIO | JIN ACTIVITY | 1 4 - 1 CAK 25 | | \$129,95 | + | X 0.4776 | = | \$62,067 | +- |
| 64 | | REHABILITATIO | ON ACTIVIT | Y 5 - YEAR 30 | | \$451,19 | 5 | X 0.4120 |) = | \$185,892 | 2 |
| 64 | 1 | | | | | | 1 | | | | 1 |

| | С | D | E | F | G | н | | J | κΙ | | М |
|------------|--|---------------------|--------------|----------------------------|---|-------------------|----------|----------------|--|---|---------|
| 10 | LIMITS OF ANALYS | | | | | 11 | H | | | | -141 |
| 11 | STATION | 839 + 00 | TO STA | TION | 1016+00 | | Н | OMISSIONS | | م ر | |
| 12 | NET LENGTH | 17700 | | 3.352 | | | | | | آ | |
| 13 | | | · | | " | · · · · · · | П | | | | |
| 642 | | REHABILITATION | ACTIVITY 6 | - YEAR 35 | | \$138,468 | X | 0.35 <u>54</u> | = | \$49,212 | |
| 643 | | | | | | | Ш | | | | |
| 644 645 | | REHABILITATION | ACTIVITY 7 | ' - YEAR 40 | | \$218,064 | X | 0.3066 | = . | \$66,858 | |
| 645 | | | | | · | | Ш | | | | |
| 646 | | | | | TOTAL REHABILITATION COST (PRESENT WORTH) | | | | = | \$475,114 | |
| 647 | | | | | | • | П | | | | |
| 648 | ANNUAL COS | T PER MILE | CALCUL | ATION - | ** | | П | | | · · · · · · · · · · · · · · · · · · · | |
| | CONTINUOUSLY REINFORCED CONCRETE & UNBONDED CONTINUOUSLY REINFORCED CONCRETE OVERLAY | | | | | | | | | ~ | |
| 650 | | | | | l l | TOLD COTTO | Ť | | i l | | |
| | | Mile ==> A = D | + M +CRE | n x [C + R1(PWFn1) + | ! | PWFnn\ 1 | ┝ | | - | <u> </u> | |
| 652 | | D = Admin & Ov | erhead per | mile: M = total annual | maintenance cost per mile | Δ | \vdash | | | | |
| 653 | | | | nstruction Cost per mile = | | | | | 1 | | |
| 654 | | | | | \$ \$ 505.00 | Annually per Mile | | | | | |
| 655 | | ļ | | CRF(n) => n= number of ye | ars, usualiv 45. | Tunicany por i | T | | 1 | *************************************** | |
| 656 | | $CRF(45) = \{0.$ | 03(1+0,03) | 45) / [(1+0.03)^45 - 1] = | | | ✝ | | ļ—— <u> </u> | , | |
| 657 | | 1 | Γ' | | | | 1 | | | | |
| 658 | | | | | | | T | | | | |
| 659 | Rehabilitation cost p | er mile and capital | Recovery fac | ctor | • | | Τ | | \ | | |
| 660 | | | \$2,817 | | | | T | | | | |
| 661 | R2(PWF15) = | | \$4,886 | | A== | \$ 111,277.37 | S | annual cost pe | r mile | | |
| 662 | R3(PWF20) = | | \$25,435 | | | | 1 | | T | | |
| 663 | | +1-+- | \$18,515 | | | | \perp | | | | |
| 664 | | | \$55,453 | | | | | | | | |
| 665 | | 1 10 10 100 | | | | ANNUALC | OS | T PER MILE | 22 | \$111,277 | |
| 666 | | | | | | AITROAL | | I I MINITE | 1 | 7 | |
| 667 | | TOTAL = | S141,729 | şī. | | | | | <u>_</u> | | <u></u> |
| 668 | | | | | | | | ł | 1 | <u> </u> | |